Institute for Global Prosperity

NATIONAL CONTRIBUTIONS

Reforming tax for the 21st century

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with economic modelling by **Howard Reed**

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NATIONAL CONTRIBUTIONS

REFORMING TAX FOR THE 21ST CENTURY

WRITTEN BY **ANDREW PERCY**
WITH ECONOMIC MODELLING BY **HOWARD REED**

ABSTRACT

To raise the revenues to meet the challenges of the 21st century, the UK's tax system will have to be reformed to increase transparency, reciprocity, and solidarity. This report describes how those reforms can be made with a system of National Contributions that clearly links contributions to entitlements.

There are three key features of National Contributions: a progressive rate structure linked to average incomes; a flat definition of incomes; and a commitment to the allocation of revenues from individuals to services for those individuals. It is a *PRoFI* tax system: Progressive Rates on Flat Incomes.

We model a pathway to prosperity through modernising the tax system, simplifying and broadening the tax base, funding public services to build reciprocity, and then funding Net Zero investments. Distributional analyses of each stage on that pathway are included.

NATIONAL CONTRIBUTIONS INNOVATIONS

1. A system of taxation constructed to connect individual taxes to the state of the economy, one that ensures taxation changes in line with relative position on the income distribution.
2. Demonstrating both the revenue opportunities and limitations to equalising the taxation of passive incomes.
3. Integrating public services entitlements into tax design.
4. Replacing income allowances with voluntary contribution thresholds to maintain efficiency without denying participation

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INTRODUCTION

The UK faces an immediate and critical dilemma: how to pay for the solutions to its 21st century challenges. The problems are well known. We even have potential solutions. But a failure to align incentives has proven an obstacle to change. This report focuses on the practical implementation of reforms that turn the tax system from a 20th century barrier into part of a 21st century solution.

The tax system has a critical role in supporting the transformation, and just transition, of our societies and economies to meet the challenges of the 21st century

Spending reform will be needed if we are to avoid overwhelming the economy to fund those challenges. But without tax reform, spending reform will be obstructed by weak reciprocity. That is the central conclusion of the adjunct paper, Universal Basic Prosperity (Percy 2021). The challenges of ageing demographics, climate change, inequality, and insecurity require a collective response with collective resources, directed by mutual, common, collective interest. But the current tax system is not fit for this purpose, instead pitting contributors against beneficiaries, and separating people at a time when greater solidarity is vital.

The productivity needs of our 21st century economy demand broader access to both basic safety and opportunities — aka “levelling up”, in the contemporary language of British politics. The social care of an ageing population demands immediate solutions. Urgent transformation of the economy is required to avoid destabilising the climate we all rely on. Together, those costs undermine the delicate hiatus that has been established for over 50 years (Percy 2021).

As an advanced, technical economy, the UK needs to maximise productivity. Doing so requires structures that enable the potential capacities and capabilities of as many as possible. And this requires that the basic safety and security of everyone is assured. Basic safety will have to be expanded, and the efficiency of its provision simultaneously increased (Percy 2021). Without a transformation in efficiency, the costs will reduce the motivation and opportunity essential to the maintenance of an advanced, technical society. At the core of this proposal for tax reform is the transformation of social safety, so that is better and cheaper. But reform of spending on social safety will require much stronger reciprocity between citizens across the income spectrum. And stronger collective reciprocity requires that taxation be reformed first.

The recommendations in this report are to modernise the tax system by simplifying and consolidating taxes on active and passive incomes, and linking revenues from those taxes to spending on public services for taxpayers. Those are the foundations for the strong reciprocity needed to address the shared problems of the 21st century.

The chorus for this kind of reform is growing louder. We build on recommendations from the Office of Tax Simplification (OTS), the Institute for Fiscal Studies (IFS), the Resolution Foundation, and the Institute for Public Policy Research (IPPR).

The technical problems created by piecemeal reform (Adam, Miller 2021) mean that wholesale reform is necessary, requiring strong political will. This report paints a clear picture of the comprehensive reform that political will could deliver.

To simplify incomes tax, we propose a system of "National Contributions", a smoothly progressive rate structure, applied to a flat definition of incomes that includes both active and passive incomes. Anchored to average income, a system of National Contributions (NCs) broadens the tax base and creates mutual interest in economic development. If the economy grows, but someone's wages do not, then their taxes automatically fall.

PRoFI - PROGRESSIVE RATES ON FLAT INCOMES

A progressive rate structure applied to a flat definition of incomes, anchored to the median income, with thresholds for voluntary contributions.

To create strong reciprocity, we propose a broad hypothecation of revenues from taxes paid by citizens, to services for citizens. The consolidation of various incomes taxes into NCs allows hypothecation without reducing the flexibility of general revenues. We demonstrate a model assignment of revenues and spending that shows that this broad hypothecation is possible without changes in current budgets.

To demonstrate raising the funding required to address social care, levelling up, and climate change, we model a pathway to prosperity with three clear stages: Modernise the system, Build reciprocity, then Transform to reach Net Zero.

1. Modernise: Revenue-Neutral Tax Simplification

Modernise focuses on simplifying the system by combining National Insurance Contributions (NICs), Income Tax (IT), Capital Gains Tax (CGT) and Inheritance Tax (IHT) into a single tax: National Contributions (NCs). Wages and passive incomes from capital gains, dividends, and inheritances are combined into a single definition of income. The model generates the same revenues as the current system with a Base rate of 17%, a Top rate of 44%, and Voluntary National Contributions (VNCs) for everyone earning less than £19,000 (full-time job on National Living Wage). This is distributionally positive for 88% of all taxpayers, and 100% of taxpayers with no passive incomes.

2. Build: Reciprocity

Build generates sufficient revenues to fund cost of living reductions with a Base rate of 18%, a Top rate of 47.6%, and VNCs for everyone earning less than £9,500. This is distributionally positive for 86% of taxpayers, accounting for the social wage value of the enhanced public services as well as the extra tax.

3. Transform: Net Zero

Transform generates additional revenues to fund the Climate Change Committee's "balanced pathway" to Net Zero (CCC 2020). Transform raises an additional 0.5% of GDP a year, with a Base rate of 19%, a Top rate of 49%, and VNCs below £9,500. This is distributionally positive for 82% of taxpayers.

National Contributions, connected to enhanced public services, create the platform on which the UK can build fiscal resilience, increase productivity, and establish the solidarity needed to meet the challenges of the 21st century.

The need is urgent. The time is ripe. We call on all politicians to support the urgent implementation of all the recommendations in this report.

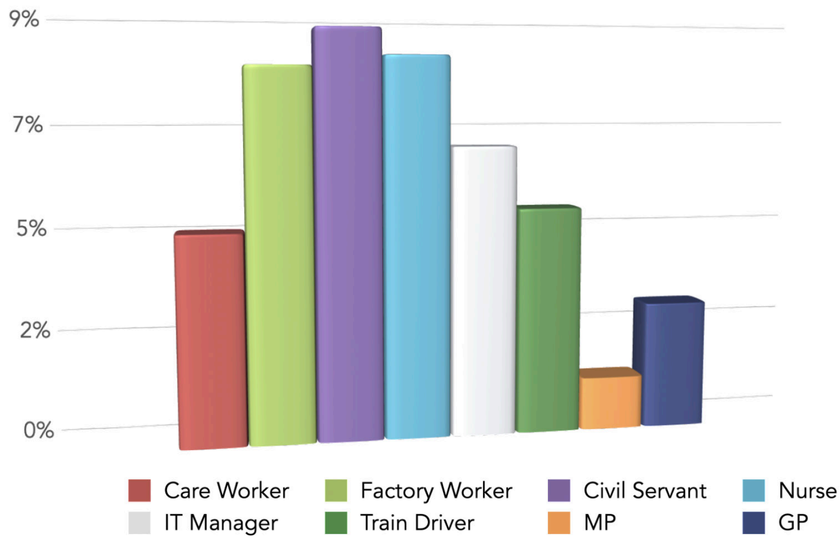
HIGHLIGHTED RESULTS

Taxes on employment (active incomes) are reduced across all of the scenarios, with additional revenues coming from aligning the taxation of passive incomes (capital gains, inheritances, and dividends) with employment.

National Contributions fund Universal Basic Services and achieve Net Zero with positive net income effects for 98% of taxpayers with no passive income.

The modelling in this report demonstrates that NCs can modernise the tax system and reduce taxes for everyone reliant solely on waged income, and 88% of all taxpayers including passive incomes. Rates are lower across the board, with a Base rate of 17% and a new Voluntary National Contributions threshold higher than the current Personal Allowance, effectively exempting anyone working full-time on minimum wage.

Figure 1: Income effects of Modernise on a selection of jobs for individuals in full-time employment with no passive incomes

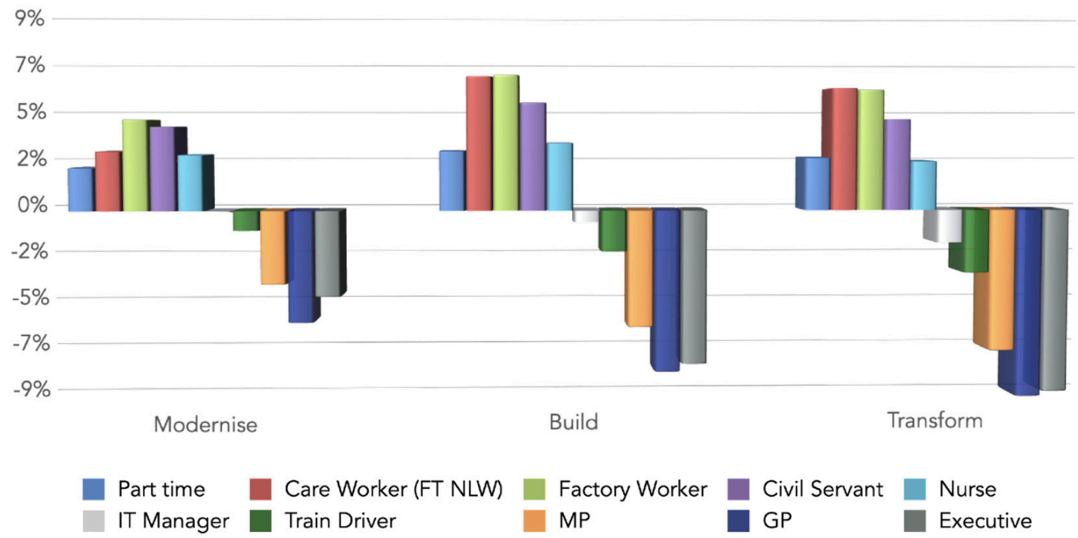


The Build model generates sufficient revenues to fund an expansion of public services to drive down the cost of living. A Base rate of 18% and a Top rate of 47.6%, remains distributionally positive for 86% of all taxpayers, accounting for the social wage value of the enhanced public services. The change in income, including the value of the UBS, is positive for 98% reliant solely on waged income.

The Transform model adds revenues to meet the Climate Change Committee's "balanced pathway" to Net Zero, and is still distributionally positive for 82% of all taxpayers relative to the current tax system.

We have modelled the effects of each of these steps for some typical workers, which are summarised in Figure 2.

Figure 2: Income effects, including typical passive incomes, on a selection of jobs



Typical passive incomes are derived from the Wealth and Assets Survey - see Appendix, Data Sources.

NATIONAL CONTRIBUTIONS

OBJECTIVES

The key objective of the proposals in this report is to create the conditions that will allow the UK to address its 21st century challenges together. That calls for a tax system that is transparent, fair, and directly related to spending. Only by combining personal and mutual interests – taking decisions together – can we address the perfect storm of climate change, ageing and insecurity that we now face.

Building that reciprocity requires a tax system that conforms to widely held, public assumptions. That the more you earn, the more tax you pay. That your money is the same as my money. And that taxes are used as promised.

First, taxation must be simplified so that people understand their contribution. Second, discrimination between different types of income is removed. Third, that a commitment to the use of tax revenues is made explicit.

SIMPLIFICATION

THE CASE FOR TAX SIMPLIFICATION

The benefits to society of simple taxation are well established and manifest in the permanent establishment of the independent Office of Tax Simplification (OTS) by the UK government in 2016.

The OTS describes the benefits of a simpler tax system (OTS 2021b), which is more intuitive and easier to understand, as:

- Improving public confidence — so people can understand where their money is going
- Boosting compliance — so that it is easier for taxpayers to comply and for HMRC to police the system
- Empowering people — to make the right decisions for their circumstances through better understanding of the consequences of their interaction with the tax system
- Minimising distortions to taxpayers' business and family choices

RECIPROCITY

In the accompanying paper, Universal Basic Prosperity (Percy 2021), a case is made for the importance of strengthening of reciprocity through tax reform. If the UK is to close the gap between resources and social safety, the choices and changes that need to be made in the short term will rely on broad participation, acceptance, and implementation. And closing that 'safety gap' is a prerequisite to addressing the challenges of fiscal stability, climate change, and an ageing demographic.

The solidarity required will have to be reflected in the tax system, which is the broadest participatory system in developed societies. More people pay taxes than vote. Taxes and spending must be more clearly connected than they are at present. Simplifying taxes, connecting revenues with spending, and broadening the tax base are all part of establishing stronger reciprocity and solidarity.

FLAT INCOMES

Discrimination between income sources negatively affects the credibility of tax, complicates the tax system, and incentivises gaming (OTS 2020). It has also created "a large, unjustified and problematic bias against employment and labour incomes and in favour of business ownership and capital incomes" (Adam, Miller 2021, p6). The case for harmonising the taxation of different forms of income is strongly aligned with established norms of good tax systems (Mirrlees et al. 2011).

REPLACE FOUR TAXES WITH ONE

Simplifying the taxation of incomes requires the UK's parallel systems of Income Tax and employee NICs to be unified into a single system.

There is broad public support for this reform, as the OTS states in the introduction in their report (OTS 2016, p4): "We should stress the high level of support we have found for making changes, from OTS stakeholders. These include employers, businesses of all sizes, tax and payroll professionals, unions, those representing the low paid and academics; they seek change to get a system that is more logical, transparent and potentially fairer."

The OTS report, "Capital Gains Tax Review: Simplifying by design" (OTS 2020), recommends the alignment of Capital Gains and Income Tax rates to create a more neutral tax system, as well as a transition to recipient-based inheritance taxation. The OTS points out the need to allow for inflation gains and the IFS has recommended introducing allowances for 'the normal rate of return' to avoid penalising saving (Adam, Miller 2021).

In a 2018 report, the Resolution Foundation's Intergenerational Commission (Corlett 2018) lays out the case for replacing the UK's dysfunctional Inheritance Tax system with a recipient-based tax. Taxing inheritance by recipient is already the practice in 20 OECD countries, with only four countries, including the UK, taxing the estate. The OECD stresses the importance of focusing on the wealth received by beneficiaries, rather than the donor (OECD 2021).

National Contributions achieve most of those recommendations at once. Capital gains are subject to the same taxation as active incomes, and inheritance incomes are attributed to recipients. The rates and thresholds that apply to NCs also apply to capital gains and inheritances, as they are all treated as income.

Lump sum incomes could be protected from taxation in a single year by giving recipients the option to place funds in national savings bonds before tax, with tax due on the sale of those bonds. Other reforms that could accompany a move to NCs include defining capital gains and savings returns as income when above the rate of inflation (Adam, Miller 2021), which better aligns with the common conception of a 'gain' and protects savers against the erosion of their savings' value. Making the use or sale of an asset a taxable event, rather than the transfer of ownership, could also aid neutrality. We expect that inheritance receipts under this system would be taken as a stream of income over five or 10 years, rather than a lump sum in the first year.

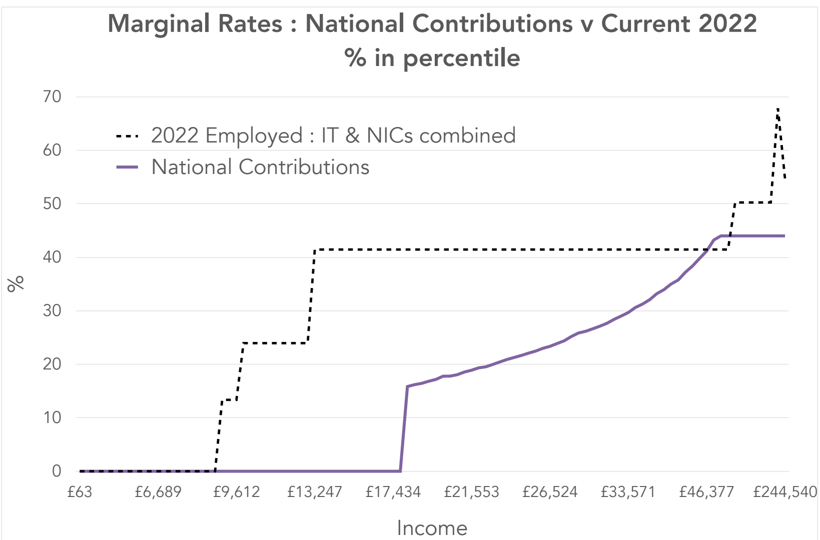
To create a model that closely approximates a flattened definition of income, we have combined capital gains and inheritances with earned incomes. Dividends are already taxed as income, but with different rates and thresholds. So National Contributions replace Income Tax (IT), employee NICs, CGT, and IHT. NCs are not a 'wealth tax' as they only apply to incomes.

SMOOTH & SIMPLE

NCs use a progressive rate structure that increases with each percentile of the income distribution. Building on proposals by the Institute for Public Policy Research (Nanda, Parkes 2019), the NCs model uses two anchor rates of taxation, in the middle and top of the income distribution, with a smooth progression between those rates.

Figure 3 shows the average tax rates charged at different income levels in the existing system, adjusted to include the recent uplift in NICs for 2022, compared with the marginal rate structure created by NCs.

Figure 3: Marginal Rates by percentile for National Contributions v. 2022 IT + NICs rates



TWO RATES

Anchoring the rates to the average distribution of incomes guarantees fairness because if average incomes increase then the tax rate automatically falls for those who do not see their personal incomes rise as well. Equally, if someone's income rises faster than the rest of the population, then their share of taxation increases. This links the general prosperity of the population to individual interests.

There are two anchor rates in National Contributions: the Base rate, and the Top rate. The political task is to set those rates.

The Base rate applies to income at the median (50th) percentile and grades down to 0% at zero income.

The rates applied to incomes between the median and 90th percentile are a straight line progression from the Base rate to the Top rate. The percentile at which the Top rate applies could also be varied by political decision. Because the range of incomes included in each percentile increases higher up the distribution, the marginal rate looks like a curve (Figure 3) even though the rate increases for the same number of taxpayers.

In this report, all incomes in the top 10% are taxed at the Top rate.

VOLUNTARY CONTRIBUTIONS

The third political task is to set a Voluntary National Contributions (VNC) threshold. NCs for anyone earning less than the threshold are voluntary.

Making a contribution is an act of solidarity, no matter how small, and should be available to all, whatever their income. However, making contributions a legal requirement at low-income levels is neither efficient nor in line with common expectations, as exemplified by most current tax systems that provide a personal tax allowance to each individual.

Anyone who makes their VNC, however small, ensures that that year counts towards their state pension record.

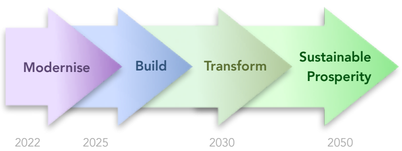
PRoFI - PROGRESSIVE RATES ON FLAT INCOMES

Honouring the ability of every citizen to contribute to the society they live in is a critically important feature of this design for taxation. Rather than exempting small incomes from taxation, the possibility to contribute should remain open to anyone who is also engaged in decision-making on spending.
These principles, which we have used to develop NCs for the UK, are just as applicable to other countries, and we hope will inspire others to devise similar PRoFI systems for their societies.

National Contributions

Pathway to Prosperity

We imagine a path that starts with modernising the tax system by switching to National Contributions, initially with no change in overall revenues. Then building the foundations for a collective effort to tackle the climate emergency, Build funds expanded public services designed to reduce the cost of living and establish strong reciprocity. Next, Transform, raising sufficient revenues to meet the goals for Net Zero.



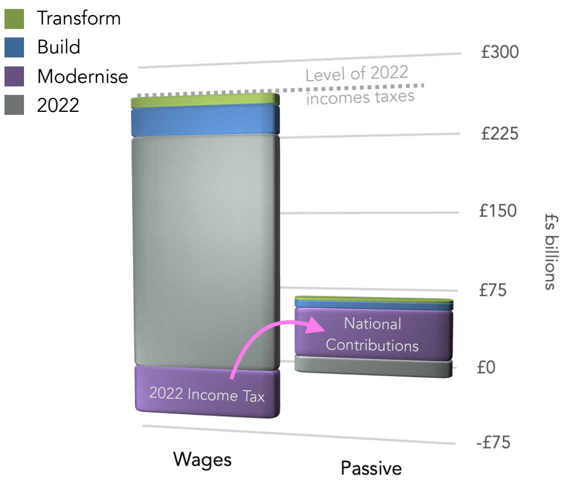
Modernise is revenue neutral.
Build funds expanded universal basic services.
Transform funds getting to Net Zero.

Rates & Thresholds

These rates are used to build the models.

- Base rate: 17% | Top rate: 44% | VNC: £19,000
- Base rate: 18% | Top rate: 47.6% | VNC: £9,500
- Base rate: 19% | Top rate: 49% | VNC: £9,500

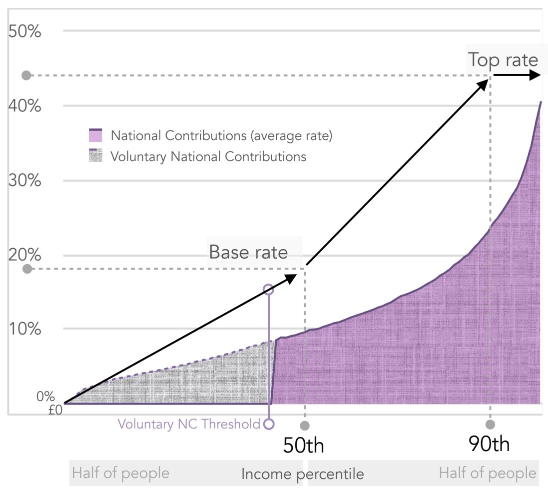
Cumulative Revenue Changes



Progressive Rates on Flat Incomes (PRoFI)
A progressive rate structure applied to a flat definition of incomes, anchored to the median income and providing thresholds for voluntary contributions.

National Contributions uses a PRoFI design that taxes wages, capital gains, dividends. inheritances and all passive incomes at the same rate.
A Base rate applies to incomes at the 50th percentile (the average income) of tax payers, grading down to 0% on £0 income.
A Top rate applies to all incomes in the top 10% and grades down to the Base rate for incomes between the 50th and the 90th percentile.
Contributions below the Voluntary NC threshold are not legally required but qualify for state pensions.

NC Rates



Universal Basic Services reduce the cost of living so that 82% of people are still better off with Net Zero investment, compared to 2022.

Compared to the current tax system, National Contributions reduces revenues from employment and increases revenue from passive incomes. Switching to National Contributions affects those with the most capital gains and inheritances, who are disproportionately those who also have the very highest or lowest waged incomes. In the middle, 92% of tax payers have less than 12% passive income. National Contributions changes the ratio of revenues from wages versus passive incomes from 18:1 to 4:1.

Panel 1: National Contributions Overview

BROAD HYPOTHECATION

A critical goal of our proposed reforms is to strengthen the connection between the taxpayers' contributions and the public services that benefit them. To achieve that objective, we propose that all revenues generated from NCs, and other taxes and levies that can be attributed to direct payment by citizens, are dedicated to spending on public services and social protection.

Aware of the pitfalls of narrow hypothecation, we are recommending a broad hypothecation. We believe this to be far preferable to current initiatives that are pushing policy towards narrowly hypothecated levies, such the recently introduced Health & Social Care Levy (HMRC 2021c). Broad hypothecation provides a defence against a creeping segmentation of general revenues into brittle silos that would constrain the ability of the UK to flexibly address challenges as they arise.

Revenues from individuals and spending on the broad categories of public services proposed in this report are already very close to equal. A broad hypothecation would be simple to make, without requiring budget changes.

MODERNISE: PROGRESSIVE RATES ON FLAT INCOMES

Modernising the tax system means simplifying it, combining NICS and Income Tax, and flattening the income definition to include passive incomes from capital gains and inheritances. National Contributions replace Income Tax, NICs, IHT, and CGT, generating the same revenues as the current system, including the uprating of NICs that starts in 2022.

To create the data for our model, we combined information from the Family Resources Survey and the Wealth and Assets Survey (see Appendix for details). The model generates equivalent revenues to projections of current policy, without relying on any VNCs. This allows a straightforward comparison of the distributional impacts of NCs versus the four replaced taxes.

INPUTS

A Base rate of 17%, a Top rate of 44%, and a VNC threshold of £19,000, are used to generate the output for this scenario. The result is distributionally positive for all income percentiles up to the 88th percentile and for everyone with no passive income.

Modernise

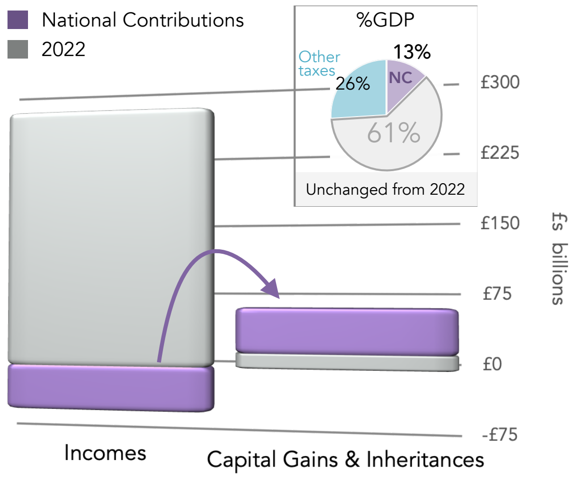
Base rate: 17% | Top rate: 44% | VNC: £19,000

Modernising the tax system

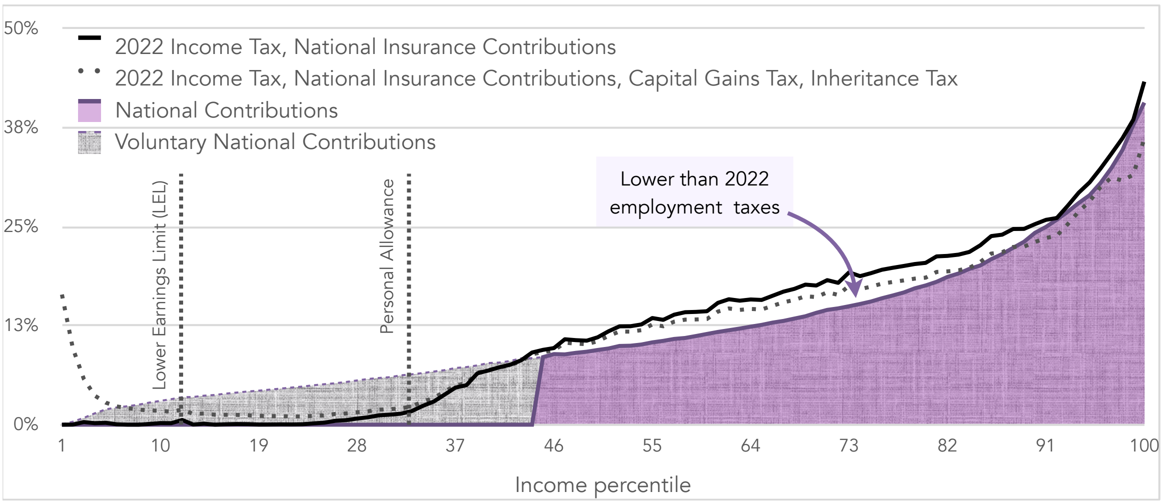
The smooth progression of National Contributions rates is shown by the shaded section in the chart below, with the Voluntary National Contributions below the 45th percentile.

Average tax rates are shown for the existing tax system with the rates effective from 2022. The dotted line shows tax rates including taxes on capital gains and inheritances, which are higher than tax rates on incomes in the lowest percentiles and lower than rates on incomes at higher percentiles due to differences in allowances.

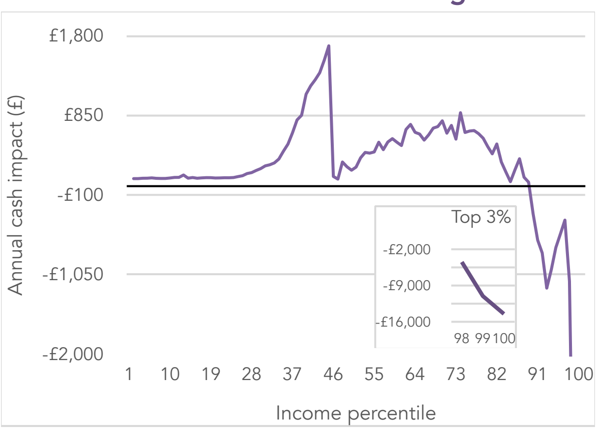
The overall effect of National Contributions is to reduce taxes on wages and increase taxes on passive incomes. **Everyone with no passive income would have lower taxes with National Contributions.**



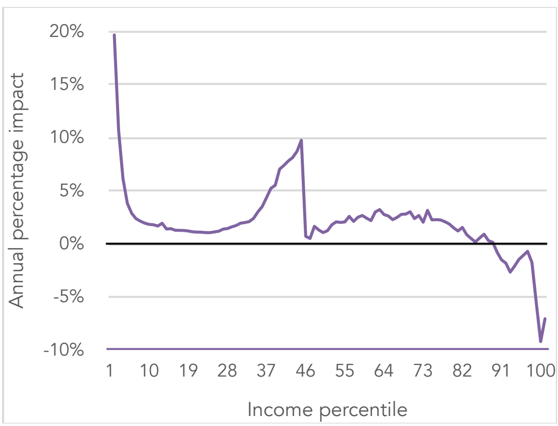
Average Tax Rates



National Contributions - Change in £s



National Contributions - % Change



Panel 2: National Contributions, change from 2022 taxes

BUILD: RECIPROCITY

Achieving the productivity gains necessary to meet the challenges of climate change, ageing, and pervasive livelihood insecurity will require a more reliable safety net. The adjunct Universal Basic Prosperity paper (Percy 2021) lays out those requirements and why they rely on increasing reciprocity in the tax system.

Dramatic increases in the efficiency of safety provision will be essential to meeting social needs and maintaining the motivational incentives that drive opportunity. Fundamental to those efficiencies is a stronger reciprocal connection between access to safety and contributions.

To model a scenario that builds safety while protecting opportunity, we leverage simplifications and income flattening to raise additional revenues for public services. In this scenario, the quality, reliability, and accessibility of a range of services that constitute a basic safety net are increased, and the tax system adjusted to cover the costs of those improvements.

In this report, we have updated the costs of the services included in the IGP's Universal Basic Services report (Percy et al. 2017) to reflect 2022 values. We have used a wider distribution of the value of the services across the income distribution to generate a spending budget that would meaningfully increase universal access to housing, food, information and local transport in the UK. The purpose is to demonstrate the effects of reducing the cost of living for those on low incomes, while broadening the tax base at the same time. The data used in this report are pre-pandemic incomes and wealth. Assuming that costs and GDP remain proportionally constant, the model provides a long-term reference for taxation levels necessary to generate the required revenues for Universal Basic Services.

Increased provision of basic services replaces private costs, and so reduces the cost to access a secure livelihood. The 'social wage' value of the services is set against increases in taxation to fund the services. The net value of the services is the distributional effect modelled.

INPUTS

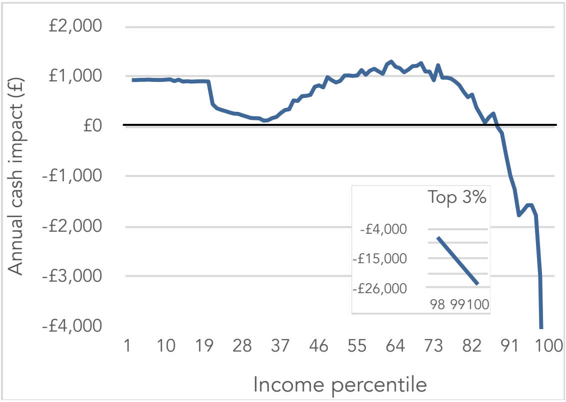
A Base rate of 18%, a Top rate of 47.6%, and a VNC threshold of £9,500, are used to generate the output from this scenario. The result is distributionally positive for all income percentiles up to the 86th percentile and for 98% of those with no passive income.

BUILD: DISTRIBUTIONAL ANALYSIS

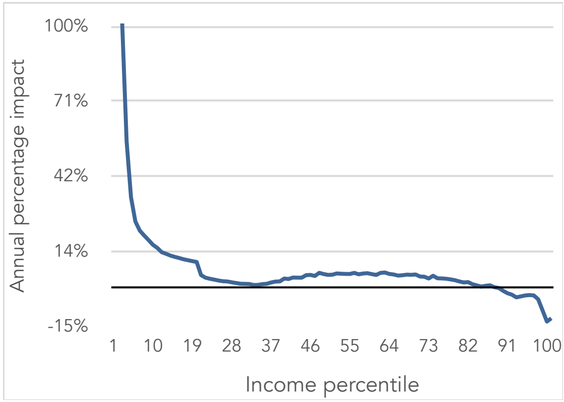
Build

Base rate: 18% | Top rate: 47.6% | VNC: £9,500

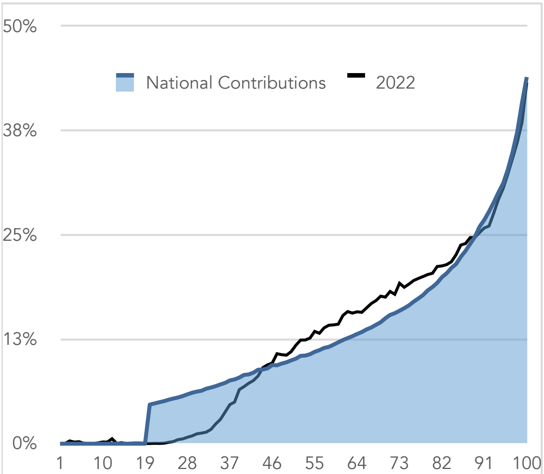
Build - Change in £s



Build - % change

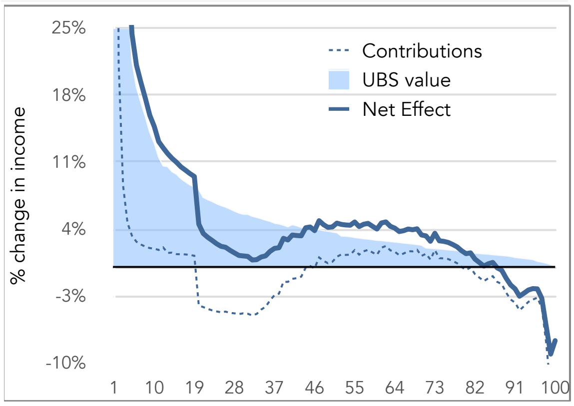


Average Tax Rates

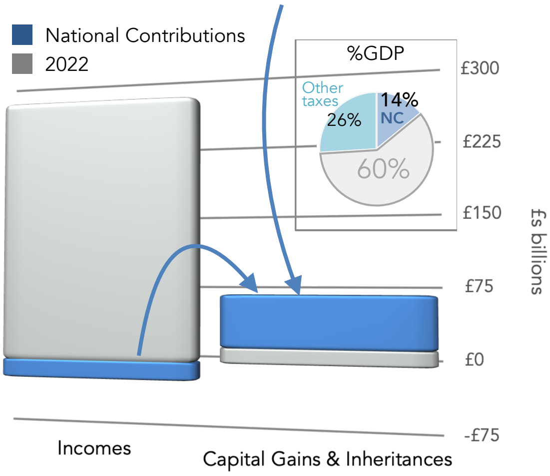


Effects on incomes relative to current policy

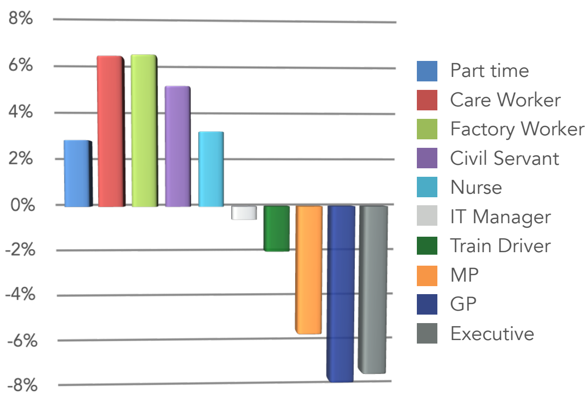
The value of the Universal Basic Services offsets increased tax contributions up to the 86th percentile.



Where the revenues come from



Effects on example workers, including passive incomes



Panel 3: Effects of National Contributions to fund Universal Basic Services, relative to 2022 taxes

TRANSFORM: NET ZERO

The impact on public finances of the UK's Net Zero by 2050 commitment is subject to complex uncertainty. However, given the certainty of the need, we illustrate a possible scenario.

The Climate Change Committee's 6th Carbon Budget (CCC 2020) estimates that reaching Net Zero will require annual capital investment of £50Bn per year for 30 years (see Figure 3 in CCC report). Savings from reduced operational costs exceed capital investment requirements from 2040s onwards. If we assume that after 2040 the opex savings are captured to fund the ongoing capex requirements, then the investment needs for the next 20 years are the funding hurdle we need to overcome. That is about £1 trillion (50% of GDP) of investment needed over the next two decades.

Net Zero investments correlate more strongly with population than income. Every house has to be made efficient, no matter the income of its occupants. Given how tenuous a grasp the lowest income earners have on a secure livelihood already, it's very possible that half the investments required will have to be socially funded. Many in the bottom half of the income distribution have neither the investment nor the repayment capacity. The investments will probably have to be publicly underwritten due to asymmetries in private finance objectives (HMT 2021), and best funded over multiple generations. So, even though the costs are considered investments in the short term, they'll exert demands on public funds over the long term as repayments come due.

It is possible, therefore, that UK public finances will have to accommodate around half the required funding, 25% of GDP or £500Bn. Initially, that requires debt capacity, and then requires revenue capacity. The average additional annual revenue required would be roughly 0.5% of GDP, funded over the next 50 years. Long term rates are about 1.25%, so 0.5% of GDP is a reasonable estimate of long term funding cost over 50 years. This correlates strongly with the CCC report's Annualised resource costs for the Balanced Pathway (CCC 2020; Figure 5.4) "Illustrative package of Exchequer funding in the Balanced Pathway (2030)" in Table 6.1 (CCC 2020, p310), and is about double current spending.

The Transform model carries over the UBS budget from the Build model with a total increase in revenues of 1.97% of GDP compared to 2022 baseline.

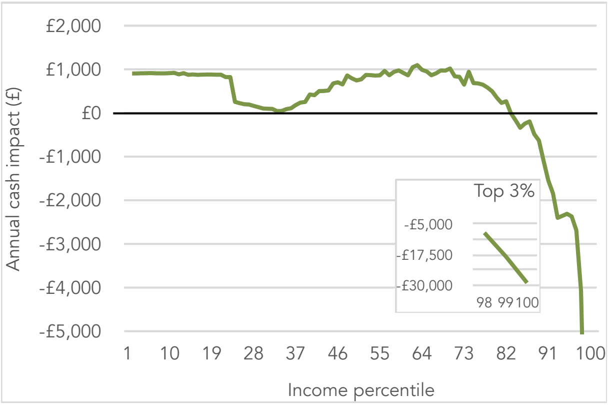
INPUTS

A Base rate of 19%, a Top rate of 49%, and a VNC threshold of £9,500, are used to generate the output for this scenario. The result is distributionally positive for all income percentiles up to the 82nd percentile and for 98% with no passive income.

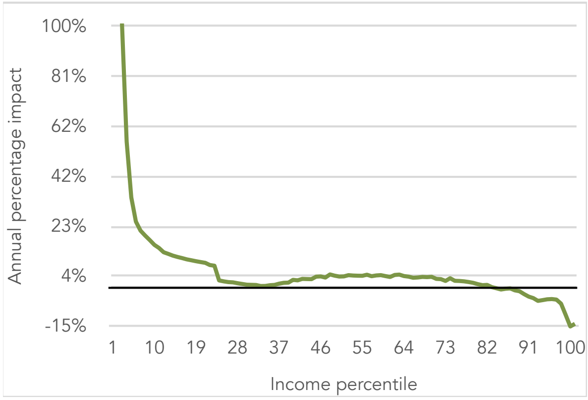
Transform

Base rate: 19% | Top rate: 49% | VNC: £9,500

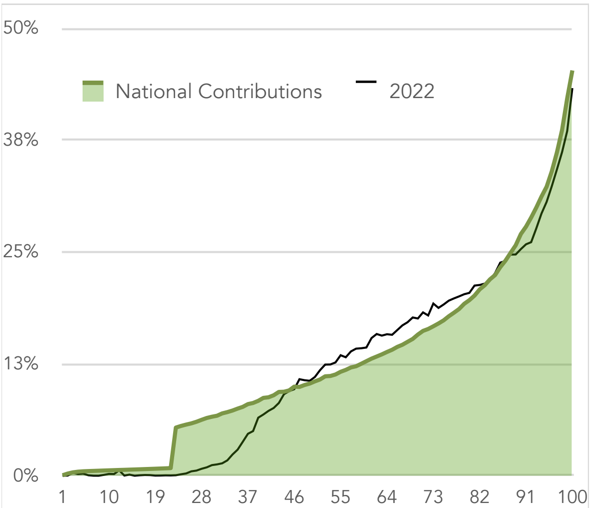
Transform - Change in £s



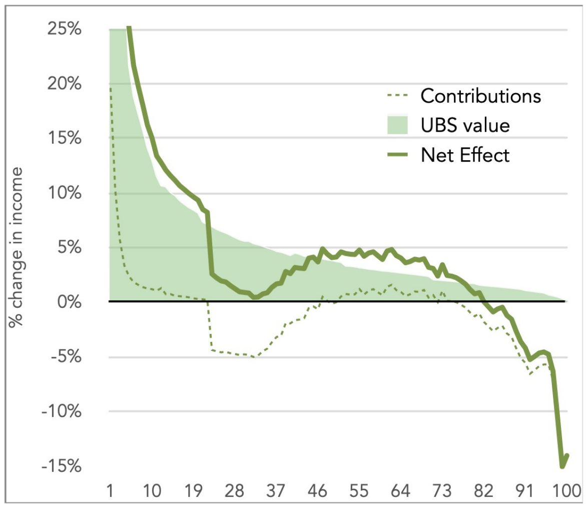
Transform - % Change



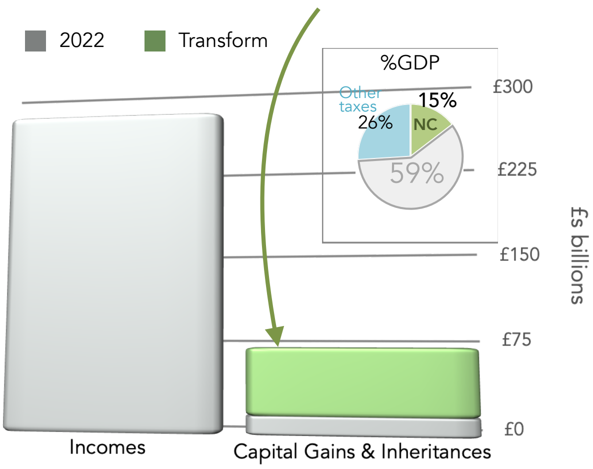
Average Tax Rates



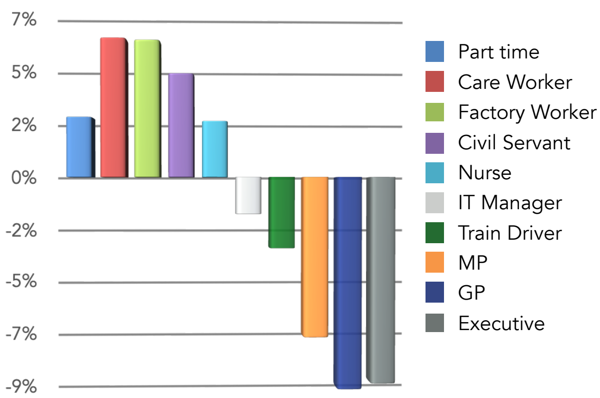
Effects on incomes relative to current policy



Where the revenues come from



Example effects on typical workers, including passive incomes



Panel 4: National Contributions to fund Net Zero, relative to 2022 taxes

STRENGTHENING RECIPROCITY

Our proposal for a broad hypothecation builds on the consolidation of four current taxes into a single National Contribution to allow commitment of the revenues to public services and social protection. The primary objective of this reform is to clearly connect contributions to benefits. That link overtly establishes the reciprocal benefit of access to universal services and social protection with the obligation to contribute to those services and protections.

Strengthening reciprocity is not a nice-to-have or side benefit of these reforms. Strengthening reciprocity is the reason to implement these reforms. The substantial costs that will be forced on societies by inexorable increases from climate and ageing will require significant and impactful changes to spending and taxation in any case. Broad public commitment to those decisions and the consequences will be needed. Societies will have to be truly 'in it together'.

CONNECTING PUBLIC SPENDING AND REVENUES

The premise of the hypothecation is that all revenues generated by *taxes paid by citizens* are committed to spending on *services for citizens*. While it can be argued that all taxes are eventually paid by citizens, because they pass through in pricing, the distinction between direct and indirect payment is obvious. Similarly, it could be argued that all spending supports society, but, again, the distinction between spending on public services that citizens use and indirect support is obvious.

Analysis of existing revenues and spending suggests that a straightforward allocation can be made without material changes in current budgets (Table 1). There is an almost exact match between revenues from taxes that conform with this proposal, and spending on services for citizens. Revenues from existing equivalents to NCs and spending on equivalents to Universal Basic Services make up 43% and 44%, respectively, of existing revenues and spending.

REVENUES

The OBR databank provides a breakdown of Receipts (OBR 2020) that total to the same values as the Budget 2020 report (HMT 2020b). However, the presentation in the Budget 2020 report by the Treasury assigns tax revenues subjectively, lumping some revenues that we would identify as part of National Contributions into "Other taxes". So, we used the OBR receipts data to more clearly separate out revenue streams that would be part of NCs, and to identify other levies, duties, and taxes that meet the criteria of direct payment by citizens.

SPENDING

We have relied on the high-level categorisation of spending presented by the Treasury's Budget 2020 report to assign spending to the various Universal Basic Services. In designing the presentation of those categories the Treasury has made decisions about allocations that we do not query and which are, no doubt, subjective. We rely on the logic that the Treasury used to make those assignments.

HYPOTHECATION OVERVIEW

Treating revenues and spending detailed in Table 1 creates a direct match at £729 billion, or 31.6% of GDP.

Table 1: March 2020 Budget forecast, spending and revenues

Budget 2020 spending

	£ bn	% spend	% GDP
UBS spending	408	44%	18%
Other safety spend	321	35%	14%
Total safety spending	729	79%	31.6%

Budget 2020 revenues

	£ bn	% revenues	% GDP
Incomes taxes	375	43%	16%
Consumption taxes	261	30%	11%
Local property taxes	38	4%	2%
+ deficit	55		2%
Total revenues from individuals	729	77%	31.6%

The assignments in Table 1 are derived from analysis of budgets as shown in Tables 4, 5, and 6 in the Appendix.

HYPOTHECATION & NATIONAL CONTRIBUTIONS

The hypothecation example in this report demonstrates the feasibility of making the commitment with existing revenues and budgets. Introducing NCs to replace the existing incomes taxes does not affect the hypothecation because it does not change the categorisation of those revenues. In both cases, taxes on incomes are included.

The Modernise model is a revenue neutral scenario, so does not affect the balance between hypothecated categories. The other models raise additional revenues which are allocated to public services or public infrastructure and, therefore, have an equal effect on both sides of the hypothecation.

Our argument is that broad hypothecation creates the conditions that would support rising additional revenues.

EFFECTS ON EXAMPLE WORKERS IN TYPICAL JOBS

Broadly speaking NCs move the tax burden from employment to passive incomes. The effects will differ and depend on where people are on the scale of incomes, how much of their income is active or passive, and the extent to which they make use of Universal Basic Services.

The modelling of the scenarios in this report provides average results for average people, but we have also calculated the effects on example workers in typical jobs using more specific calculations of their actual taxes due in 2022, after the recent increase in NICs take effect.

Table 2 shows the inputs into the modelling of example workers, with the baseline calculations of taxes in 2022, and the offsetting value of UBS to show the net effect of NCs at the Build stage.

Table 2: Example worker profiles

%tile	Job	Typical annual wages	Total Income incl. capital gains & inheritance	2022 tax incl CGT & IHT	National Contributions	NCs v 2022 taxes	Value of UBS	Net change (£s)	Net change (%)
26	Part time	£10,400	**£11,589**	£225	£642	-£417	£730	£313	2.7%
46	Care Worker (FT NLW)	£18,000	**£20,096**	£2,330	£1,896	£434	£789	£1,223	6.1%
62	Factory Worker	£24,000	**£27,083**	£4,346	£3,428	£918	£746	£1,664	6.1%
71	Civil Servant	£29,000	**£32,961**	£6,031	£5,087	£944	£669	£1,613	4.9%
79	Nurse	£34,000	**£39,162**	£7,731	£7,200	£531	£669	£1,199	3.1%
89	IT Manager	£47,000	**£52,320**	£12,060	£12,973	-£913	£631	-£282	-0.5%
92	Train Driver	£54,000	**£59,529**	£14,872	£16,570	-£1,697	£589	-£1,108	-1.9%
97	MP	£82,000	**£93,146**	£27,100	£32,572	-£5,472	£516	-£4,956	-5.3%
98	GP	£98,000	**£115,602**	£34,213	£43,261	-£9,048	£516	-£8,531	-7.4%
100	Executive	£247,000	**£322,410**	£118,530	£141,701	-£23,171	£516	-£22,655	-7.0%

Panel 5 illustrates the differences between the effect of NCs for people who only have active incomes from wages, versus people who have a blended income that includes both active and passive incomes.

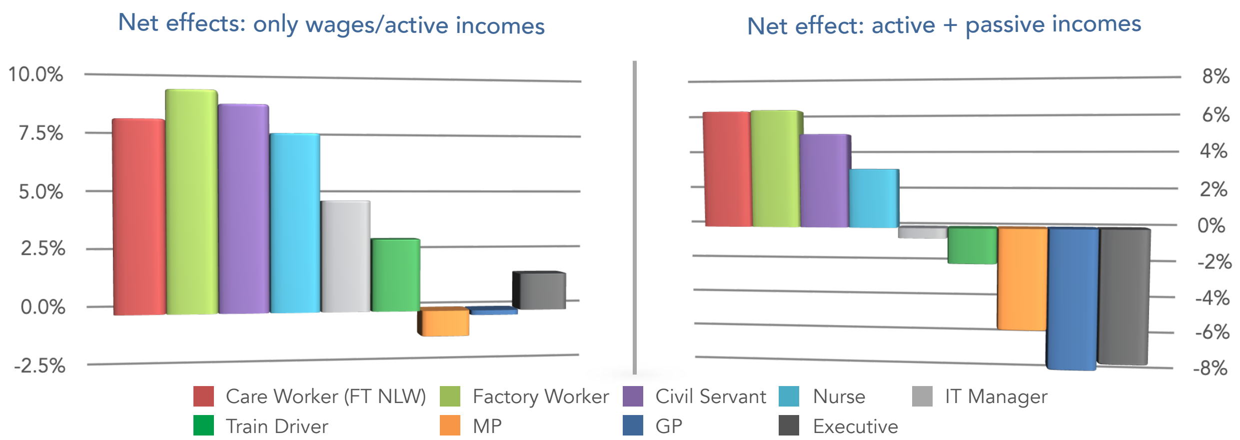
Build: effects on example workers

Build adds Universal Basic Services and increases NCs to pay for them.

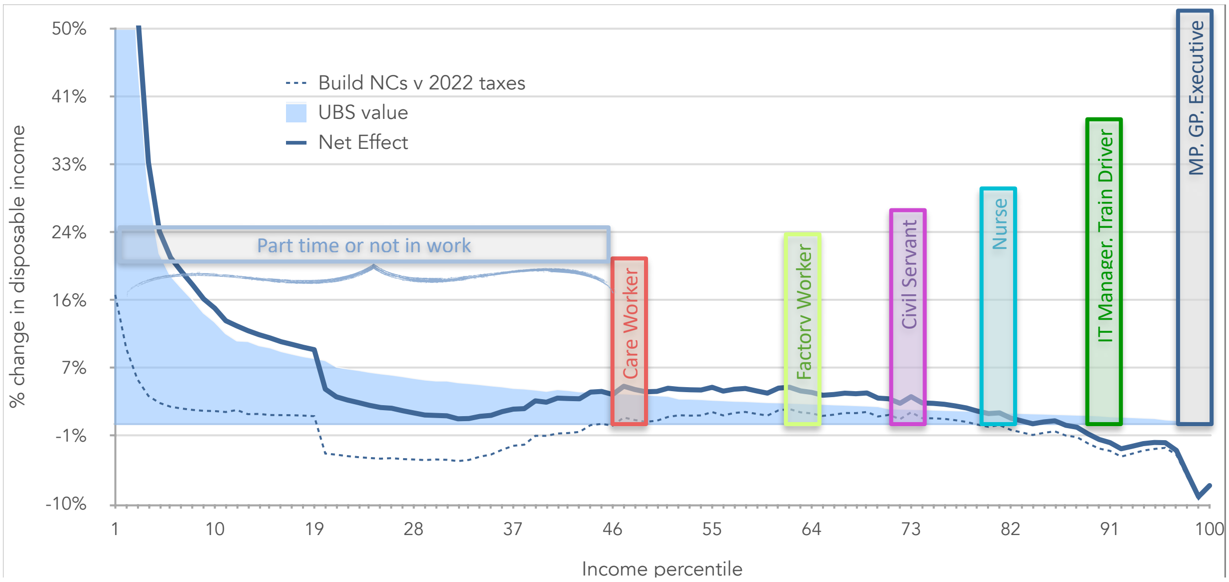
98% of full-time workers with no passive incomes (capital gains and inheritances) have lower taxes than the current tax system. 86% of all taxpayers have higher disposable incomes with UBS.

To illustrate the effects of reforming the tax system with NCs we have estimated the effect on different types of jobs. Typical incomes for various roles were taken from job sites and industry associations and are approximate for a person established in that job. Based on those incomes, we assign the roles to percentiles in the income distribution - see chart at bottom showing where different jobs lie on the distribution of all taxpayers in the UK.
Typical passive incomes, from capital gains and inheritances, are assigned based on the ONS Wealth and Assets Survey to result a typical overall annual income. The 2022 rates for Income Tax and National Insurance Contributions are calculated, and Capital Gains Tax and Inheritance Tax estimated. National Contributions are calculated for each job role.
The effects shown in this panel combine changes in taxation with reduced cost of living from UBS.

Wages v. Passive



Example jobs on the national incomes distribution



Panel 5: Effects of NCs on selected example jobs in the Modernise scenario

JOSHUA'S JOURNEY

To illustrate a storyline progressing through the scenarios, we provide a portrait of an example worker in the healthcare sector.

Joshua, an employee in the healthcare sector, earns an above average salary but is struggling to get by. He is just about managing, but finding it hard to imagine how he will cope with the pressures that that threaten to push up his cost of living in the future.

His annual salary is £34,000 which means that he earns more than 78 out of 100 taxpayers. He does not qualify for any benefits. Taxes deduct £7,532 in Income Tax and NICs, leaving him with £2,206 in his pocket each month.

He lives on his own and spends 40% of his income on rent, council tax and bills. That leaves him with £1,323 for food, getting around, maintaining his flat and saving. That means he has about £120 a month for going out and entertainment.

The trouble is that his rent is about to go up because the boiler in his flat needs replacing to meet the new environmental requirements, so the landlord is going to have replace it with an electric one and upgrade the windows. On top of that, his car is eight years old. Soon he won't be allowed to drive it into town to shop because its emissions are too high. How he is going to be able to cope with all of these costs makes the future seem even more uncertain.

Luckily the government has decided to modernise the tax system and move to NCs. Immediately, Joshua is getting £182 more in his bank account every month because taxes on wages have come down, and Joshua does not have any income from investments or inheritances. Now getting a new electric car on a lease looks like a great option, once he has saved for the deposit.

Next, the government introduces free bus passes and an Internet subsidy for everyone. Joshua's costs come down again, this time by about £56 a month. The council has also decided to go ahead with a new home building programme which will offer super energy-efficient flats at social rents, so Joshua puts himself down on the waiting list. A couple of times a week Joshua stops by at the British Restaurant that has opened in his local community centre on his way home from work. His taxes have gone back up, but are still less than they were before NCs were introduced. Joshua feels much more secure about the future now, and his cost of living has come down.

He learns that the rent won't be going up after all, because the government's new investment program in Net Zero will help offset the costs of the new boiler and windows. Rents are also coming down in the area as the new council flats become available. Joshua has many more options than he did before. The bus services have been improved and he is not thinking of getting an electric car any more, as his commute is free and quick with the new bus lanes.

The mood among the whole community feels more positive. People feel more secure, and real action is being taken to address the climate emergency that has been worrying a lot of people for some time. Through the British Restaurant, Joshua has met many more of his neighbours than he previously imagined, and now he has started a coding club on Thursday evenings with some of his new friends.

There's still a real hill to climb to reach the "Real Zero" goal that the government is talking about now, and Joshua knows it's going to mean that he will have to make more contributions to that effort. But so will everybody else. It feels so much more doable now that the costs of basic, everyday things are more affordable and rents keep coming down.

Sometimes he finds himself day-dreaming about what it might be like to be really young right now. A few short years ago in 2021, it seemed to be getting harder and harder to make ends meet. The future looked unpromising. Now, it looks brighter and greener.

Table 3: Joshua's Journey in residual income

Joshua's Journey to Transformation and Net Zero

Job in the 79th percentile No passive income			Monthly	Change on 2022
Wages		£	2,833	
2022 taxes		£	(644)	
	Net income in 2023	**£**	**2,189**	
National Contributions	Lower tax	£	182	
	Net income with NCs	**£**	**2,371**	8.3%
Build : UBS values	Information	£	38	
	Transport	£	12	
	Housing	£	0	
	Food	£	6	
Build: additional NCs		£	(138)	
	Net income after Build	**£**	**2,289**	4.6%
Transform: additional NCs		£	(27)	
	Net income after Transform	**£**	**2,262**	3.3%

OBSERVATIONS

TAXING PASSIVE INCOMES: LIMITATION

Our modelling shows that bringing the taxation of passive incomes in line with active income allows revenues to increase without raising taxes on active incomes. But this is limited.

After about 3.5% of GDP in additional revenues, compared to our 2022 baseline, the majority of new revenue comes from the taxation of active incomes, which outnumber passive incomes 7:1.

Passive incomes are about 8% of GDP and currently taxed at a rate about 35% of the rate on active incomes. Once the rate on passive incomes has come inline with the rate on active incomes an additional 2% of GDP will be generated.

A high proportion of total passive incomes accrue to the top 10% of the income distribution, so the average tax rate on passive income ends up being much higher. Average NC rates on passive incomes are 32%, as opposed to 19% on active incomes, in the Modernise model. In the Transform model those rates are 37% and 21% respectively, with a Top rate of 49%.

However, as the Top rate approaches 50%, additional revenues will have to come from increasing the Base rate.

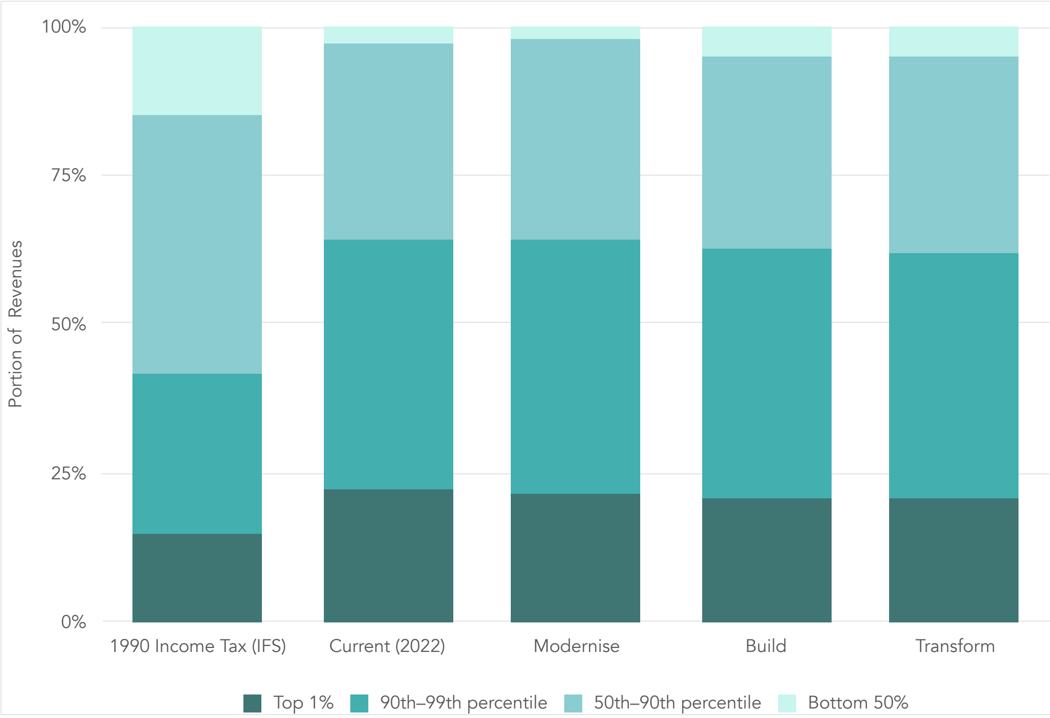
If additional revenues were targeted to come mostly from passive incomes then the Top rate would have to exceed 50%. The behavioural effects of such high marginal rates are mostly guesswork, especially considering the modern context of global capital mobility that renders 20th century references obsolete. Also passive incomes are much more amenable to timing and construction choices, as we have incorporated in an assumptive dispersion of inheritances over a decade. In this report we assume that a 50% marginal rate of tax on any income is the maximum that can be reasonably modelled. No doubt there are those that would argue that this is too conservative, and others that it is impractically high.

BROADENING THE TAX BASE

The PRoFI design of National Contributions spreads revenue contributions more evenly across the income distribution than the current system. As a result, a lower proportion of total revenues is generated by the top 1% and a higher portion by the 90th to 99th percentiles (Figure 4).

Broadening the tax base so that it more closely resembles the profile in the 1990s is generally considered a good thing (IFS 2021b), but it does mean that the relative effects of NCs on the top 1% are lower than on those in the 90th-99th percentiles, despite the absolute effect being considerably higher. This is evident in the portraits of typical workers.

Figure 4: Revenue contributions from segments of taxpayers



PUBLIC DEBT LEVELS

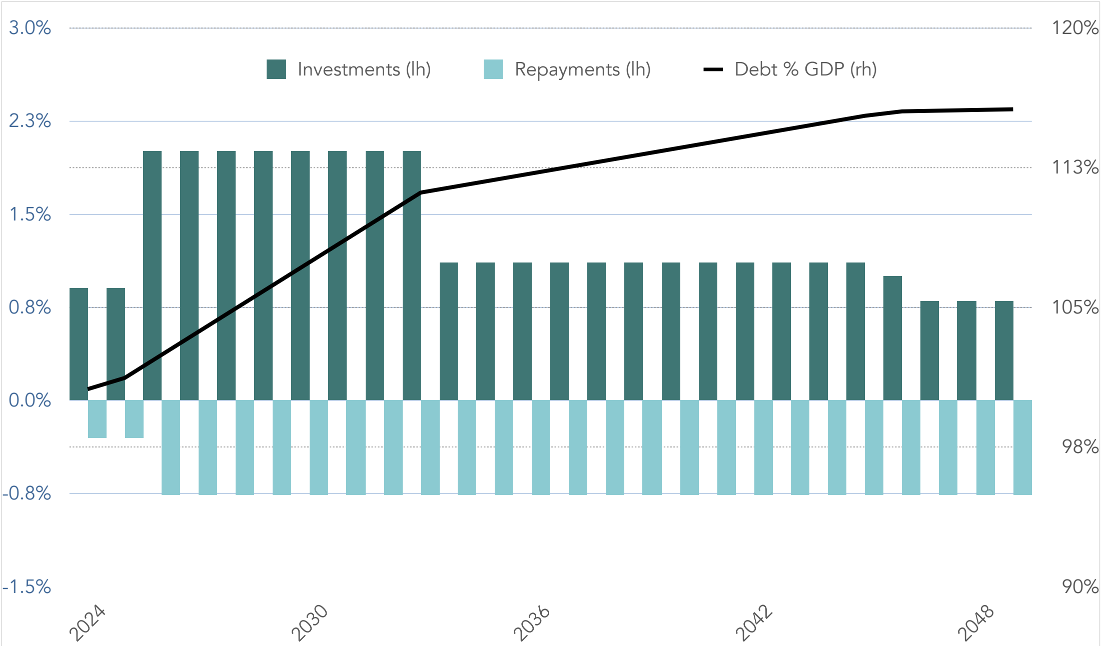
The Build and Transform scenarios both include expansions of public debt funded over decades. We estimate the approximate effect of these investment programmes on the overall levels of public debt over the funded period. We have not factored in GDP growth in order to keep the presentation simple and uncontroversial.

The Build scenario includes £204 billion accumulated over a 10 year building programme, paid for over 30 years. The Transform scenario includes £500 billion accumulated over 20 years and paid for over 50 years.

We assume a Pathway through the scenarios starting with the Modernisation of taxes by introducing NCs. Then a two year gap before the Build scenario starts, and then further two years before the Transform scenario starts. In combination these scenarios result in a peak increase in public debt of 16% over baseline 24 years after the Modernisation stage has begun (Figure 5). The trajectory of debt after the mid 2040s depends in the level of ongoing investment needed to sustain reduced emissions. Figure 5 assumes a baseline debt of 100% of GDP at the start of the timeline.

Economic modelling of the 6th Carbon Budget (Chewpreecha, Summerton 2020) suggests that GDP could be 2-3% higher from 2030 if the investments are made, and assesses the distributional impact of the 'balanced pathway' to Net Zero as only slightly progressive. We have not factored those estimates into the overall distributional analysis due to their small and uncertain effects.

Figure 5: Public debt trajectory with Build & Transform



PUBLIC OR PRIVATE?

The budgets assigned to Net Zero in the Transform scenario are assumed to be covered by taxation, implying public investment. There is no consensus on the share of the cost that will be born by private versus public investment, and much hope for more of the former and less of the latter. However, radical uncertainties on the path to Net Zero, and investment needs in populations without the financial capacity to fund them, are significant barriers to independent private financing. Large pension and investment funds face barriers to illiquid long-term funding (HMT 2021) and are seeking the public purse to underwrite the risks (Gabor 2021).

The eventual source of funding does not change the overall resource funding envelope. If payment comes from higher bills instead of higher taxes, the draw on disposable incomes is the same. The distribution of costs is unlikely to be substantially different to progressive taxation either, as it would be those most able to pay that will do so. Using tax as the primary funding system reflects our position that the investment for Net Zero will require strong reciprocity and that will lean funding towards distributionally progressive taxation.

The Transform model places the funding cost in taxation, but portions of the costs could well come through higher costs of living. The distributional impact could be more or less progressive with greater reliance on private payment, depending on pricing regulation established by government. Given the uncertainties present in Net Zero pathways and any projection over decades into the future, we do not consider the distinction between private and public financing to materially affect the demonstration provided by the model.

VOLUNTARY CONTRIBUTIONS AND PENSION ENTITLEMENTS

Currently, in the UK system, any year where an individual earns at least the Lower Earnings Limit (LEL) of £6,240 in a year, automatically qualifies as a year towards that individual's pension record even if no taxes are due. Above £9,500, employee NICs start to become due and above £12,500 Income Tax starts.

Rather than have a complicated set of thresholds and limits for different taxes, the VNC threshold sets a single level below which making NCs will not be legally enforced. To have a qualifying year for the state pension, any citizen will have to make their NC. As a transitionary mechanism, if someone earns more than the LEL, then they would automatically qualify for a year towards their pension record, even if no voluntary contributions are made.

EMPLOYER NICs

NCs focus on personal incomes taxes and exclude the current employer portion of NICs.

As a transitionary measure, we propose that employer NICs are replaced with a payroll levy at equivalent rates to the current system. This would allow the current accounting, payroll, and collection systems, to remain in place. We prefer option 1d in the Office of Tax Simplification's report (OTS 2016) which would remove all businesses with less than 500 employees from the levy.

This administratively simple transition is revenue neutral and, therefore, has no effect on the revenue calculations or distributional analyses in this report.

This is not to imply that the current employer NICs are ideal or well constructed. A payroll tax is inherently distorting of employment practices and incentives. Eliminating all disincentives to full employment relations would be a positive reform, but is not included in this report beyond the elimination of the distinction between employment and self-employment for individual taxpayers.

CONCLUSION

The UK faces mounting pressure as a result of an ageing population and climate change. If we are to become resilient to instability, we need to reform the tax system. Increasing solidarity and support for difficult spending decisions will require public perception of reciprocity in the tax system to be strengthened.

Calls for the simplification of the UK's tax system have been getting louder in recent years, with both the OTS and the IFS making strong cases for reform. Our proposal for National Contributions provides a concrete example of how taxes can be simplified and reciprocity strengthened at the same time. By examining both revenue neutral and revenue raising scenarios, we establish that tax reform can create positive benefits, independent of views about the share of production that should be allocated to collective use.

The interaction between today's different taxes makes it close to impossible for minor modifications to achieve meaningful reform. A lack of clarity in public perceptions about the effects and uses of taxes adds another barrier to reform. So, we propose the combination of wholesale reform of incomes taxation, alongside a broad hypothecation that, when combined, make the whole system simpler and easier to understand. The primary purpose is to establish a common interest in, and collective responsibility for the difficult decisions ahead.

The current system of taxation in the UK is not fit for purpose. It is complex, opaque, misunderstood, and incapable of responding adequately to the challenges facing the UK today. Tax reform is necessary. The proposal for NCs in this report is practical, achievable in the short term, and creates the conditions that will secure the UK's future prosperity.

APPENDIX

DATA SOURCES

The calculations of income tax and National Insurance Contributions use two data sets: the Family Resources Survey (FRS) and the Wealth and Assets Survey (WAS). The FRS is the most accurate dataset available for current incomes and income taxation, while the WAS is the most accurate data for passive incomes including gains and inheritances.

FAMILY RESOURCES SURVEY

The latest FRS dataset at the time of writing for the 2019-20 tax year was used (DWP 2020). The data, comprising 33,547 individual adult observations, were analysed. A gross income figure for each adult was constructed, comprising each of the following income sources:

- Earnings from employment
- Self-employed income
- Dividends
- Other Earnings from investments and savings
- Pension income (state plus private pensions)
- Taxable benefits (e.g. contributory Jobseekers Allowance, Carers Allowance)
- Other incomes (e.g. rental income from property for landlords, royalties).

Employee pensions contributions (if any) were subtracted from this total to give a gross taxable income figure for each adult. The income figure is uprated from 2019-20 to 2022-23 to take account of forecast growth in nominal Gross Domestic Product (GDP) from the latest OBR projections (OBR Public Finances Databank, August 2021). Individuals were ranked from lowest to highest income and (using the grossing factors from the FRS to weight each individual) we divided the FRS adult sample members into 100 percentiles, where each (grossed up) percentile contained an equal number of (grossed up) members of the population.

WEALTH AND ASSETS SURVEY

We used the latest WAS dataset at the time of writing, WAS Round 6, covering April 2016-March 2018, was used (ONS 2019). The data were analysed at the individual level, comprising 40,488 individual observations. A gross income figure for each adult was constructed, using the same formula as for the FRS above.

The WAS data contain information on asset holdings that are liable to capital gains tax (i.e. most financial assets other than those in ISAs, and property holdings other than principal private residences). These were used to estimate liability for CGT using Table 3 from HMRC's Capital Gains Statistics (estimated number of individual taxpayers and gains by year of disposable, size of gain and income) and assuming that capital gains are proportional to capital holdings by amount of taxable income. This enables us to impute an estimate of taxable capital gains for each individual in the WAS sample, adjusted so that the total (grossed up) sum of capital gains is equal to the total from HMRC Table 3 for the latest year for which statistics are available (the 2018-19 tax year). While only a small proportion of adults in the UK with capital holdings will actually realise capital gains in any given year, the methodology used here is sufficiently robust to provide a distribution of capital gains by decile which can be used to estimate CGT liabilities by percentile under the current tax-benefit system, as well as adding capital gains to income for the purposes of the NCs tax base.

The WAS data also contain information on inheritances received (net of inheritance tax). The data on inheritances is adjusted by scaling up all inheritances above £375,000 by a factor of 1.667 as a rough proxy for the gross inheritance that would have been received had IHT had not been paid on taxable estates. This procedure was developed by Resolution Foundation for its report, "Passing On" (Corlett 2018).

Because of the relatively small sample size of the WAS when analysed at percentile level (with only approximately 400 adults per percentile), and the fact that there are a few people in the sample with very large capital holdings and/or who receive very large inheritances there is a lot of variation in the raw distribution of capital holdings which needs to be smoothed out to make it more reflective of the UK population as a whole. Therefore, the constructed capital gains and inheritance data in the WAS are then further smoothed (using quadratic functional approximations for the distribution of log means for percentiles 1 through 95) to remove the volatility and "lumpiness" in both distributions. For the top 5 percentiles the raw data was used as capital gains, in particular, are concentrated in the top few percentiles in a manner that is difficult to model accurately with a polynomial "best fit" function.

TAX CALCULATIONS

Using the WAS data for estimated capital gains and inheritances by percentile, and the FRS data for taxable income from all other sources, tax payments were calculated as follows:

- For the 2022-23 baseline system, income tax and NICs payments were calculated for each adult based on their income and their employment status (employee, self-employed, retired or other unemployed/inactive). CGT and IHT payments were modelled using the current CGT and IHT rules applied to the distribution of capital gains and inheritances. The overall tax take from CGT and IHT was adjusted to match HMRC statistics for the 2019-20 receipts from each tax.
- For the NCs systems, taxable income in each percentile was calculated using the FRS data. Estimated capital gains and inheritances in each percentile were then added (from the WAS data) and the NCs liability was estimated for each percentile based on the sum of income, capital gains and inheritances in each percentile.

OTHER DATA ADJUSTMENTS

FRS survey data was revised to incorporate the 1.25% increase in Employee and Employer NICs effective March 2022.

Two adjustments were made to the raw FRS data:

- Average income at the 98th percentile was adjusted up to smooth the income progression.
- Average Income Tax receipts were increased by 10% between the 86th and 99th percentiles to generate the projected revenue from Income Tax in the Spring 2021 OBR forecast.

REPRESENTING THE TOP 1%

Anyone earning more than £152,837 a year is in the top 1% of the income distribution based on the FRS data. The range of incomes included in the top 1% is ten times wider than the entire income range up to the 99th percentile. So, the FRS data have a survey incidence in the top 1% one thousand times lower per Pound of earnings than for the other percentiles. That means that representation of this portion of taxpayers is necessarily less representative than for other percentiles.

UBS CALCULATIONS

The calculations in this report are based on the values and calculations in the IGP's 2017 report on Universal Basic Services (Percy et al. 2017) except where described below.

Average inflation between 2017 and 2021 has been 2.5% so we have uprated values and budgets by 10% to derive appropriate values for 2021.

To impute per taxpayer values from household values we have assumed 2.4 people per household. Where values are attributable to people, not just taxpayers, we have uplifted the per taxpayer value by 20% to accommodate the delta between population and taxpayers. The assumption is that the value to non-taxpayers. e.g. children, will relieve costs from taxpayers.

INFORMATION

Using the cost based analysis, Method 1, of Information access in the 2017 report yields a value of £14.33 per week per household uprated for inflation, assuming that the basic service would only cover the average cost in the lowest decile for everyone.

The TV License fee has increased from £145 to £159, 10%, since 2017. This results in an average household value of £3.08 per week.

The total value per household of the Information UBS is £17.41 per week. Adjusting for households results in an annual value of £452.77 per taxpayer.

The overall cost of the Information UBS programme is estimated at £21.22bn per year.

TRANSPORT

IGP's UBS report combined analysis of bus usage with costs of extending the Freedom Pass universally, to yield per decile values of a Transport UBS that included free bus access for all. The reports included an expectation of doubled use, and attendant increase in capacity, over then current usage.

The values per decile were based on usage estimates from the Living Costs and Food Survey. We have uprated those decile values by inflation, converted household values to individuals, and applied the values equally within deciles of taxpayers.

The overall cost of the Transport UBS programme is estimated at £5.72bn per year.

SHELTER

As an estimate of an ambitious but reasonable housing investment programme the IGP's 2017 report modelled the cost of building 1.5 million social housing units over 10 years, and absorbing all the costs of those living in these units. In this report we have taken a different approach, applying a cost of living reduction across the bottom seven deciles.

The 2017 UBS report assessed costs using a mixture of build costs, utility subsidies, and lost revenues from social rents and council taxes, offset by reductions in Housing Benefits. The total cost was assessed at £13.03bn a year over 30 years. Given the cross over with other taxes that are not included in NCs, we decided not to use that methodology in this report.

Instead we focus on the same social housing building program and assume that the new housing would be occupied by those currently living in private rented accommodation and receiving Housing Benefit.

Today's interest rates would allow funding at 1.25% instead of the 1.8% rate used in 2017. We have used the unit construction cost from Shelter's 2019 report (Chaloner et al. 2018). Building 1.5 million units over 10 years, at a unit cost of £135,700, and funded by 30 year bonds with an interest rate of 1.25% would cost £8.12bn a year. We have adopted the same reduction in HBA payments as the 2017 report, £4.12bn, to leave a programme cost of £4bn per year.

We assume the occupants of the new housing would move from private rented accommodation, and that they pay social rents. Median private rents are £695/month (GOV.UK 2019) and social rents set at £225/month. Savings for each occupant household are £220.10/month after accounting for Housing Benefit. At 7.71% incidence in the lower 70 percentiles, the average effect per taxpayer in 1-70th is £110.05 per year.

FOOD

A community food programme was described as the practical and effective approach to food poverty in the 2017 UBS report, but the report only modelled the cost of a service that would address food poverty, as identified in 2016 by the Food Standards Authority. The assumption for the assignment of value for the Food UBS was that the 8% of food insecure households existed in the lowest income decile. Given that anyone in full-time employment is at the 46th percentile, and that an open community food program would reach more than the food insecure, we have expanded the catchment to the bottom 95% of income distribution to better represent the likely uptake of a broader service.

We up-rate the original per-individual user value of £39.26 per week for inflation and assume an 8% uptake across the distribution. This yields an average annual value of a community Food UBS to all individuals in the lower 95 percentiles of £73.18 per taxpayer per year.

The overall cost of the Food UBS programme is estimated at £3bn per year.

LOCAL DEMOCRACY

The representation and accountability of local government is a critical factor in delivering Universal Basic Services. So, we have included upgrades that were also part of the 2017 UBS proposal. “Responsive, effective and accountable local government – with financial autonomy – will be necessary for the practical implementation of UBS.” (Percy et al, 2017)

The accompanying paper (Percy 2021) emphasises the need to increase the efficiency of social safety in order to close the ‘safety gap’. The available efficiencies are in economies of large scale, and efficiencies of hyper-local scale. To enable the latter, we’ll need substantially higher energy local democracy, with stronger accountability and responsibility and that can shoulder more control of spending on safety services. To enable the capture of that local efficiency potential, the democratic structures of local government will have to be modernised.

We have included £3.27bn in the UBS budget for these reforms using the same proposal to implement a new local assembly in every constituency as the 2017 report, uplifted for inflation.

UBS BUDGET SUMMARY

The overall estimated cost of the UBS programmes above is £32.93bn per year. At 1.46% of GDP, this programme is substantially smaller than the 2.3% budgeted in the 2017 report. The overall efficiency of the UBS social wage value in reducing cost of living versus delivery cost is 100%.

HYPOTHECATION CALCULATIONS

TAX REVENUE TREATMENTS

The following revenues are included in the proposed hypothecation. References are to the coding in the Office for Budget Responsibility's 'Public Finances databank - June 2020' Receipts table (OBR 2020).

The total revenues included in these taxes is £674Bn.

INCOMES TAXES (NATIONAL CONTRIBUTIONS EQUIVALENTS)

The following taxes are replaced by National Contributions and the £374.6Bn generated by them included in the broad hypothecation:

- Pay as you earn (PAYE) income tax (MS6W)
- Self assessed (SA) income tax (LISB + MF6X)Inheritance (ACCH)
- Capital Gains (BKST)
- National insurance contributions (NICs) (AIIH)

CONSUMPTION TAXES

VAT consumption tax generates £160.7Bn.

- VAT (net of VAT refunds) + VAT refunds (CTRU AHGO)

Levies, excise duties and other taxes on consumption generate £100Bn.

- Tobacco (GTAO)
- Alcohol (MF6V)
- Vehicle (EKED + CDDZ)
- Air passenger (CWAA)
- Insurance (CWAD)
- Fuel (CUDG)
- Stamp (MM9F)
- Shares (BKST)
- Licence Fee (KIH3)
- Environmental (LSNT AHGP M98G)

LOCAL PROPERTY TAX

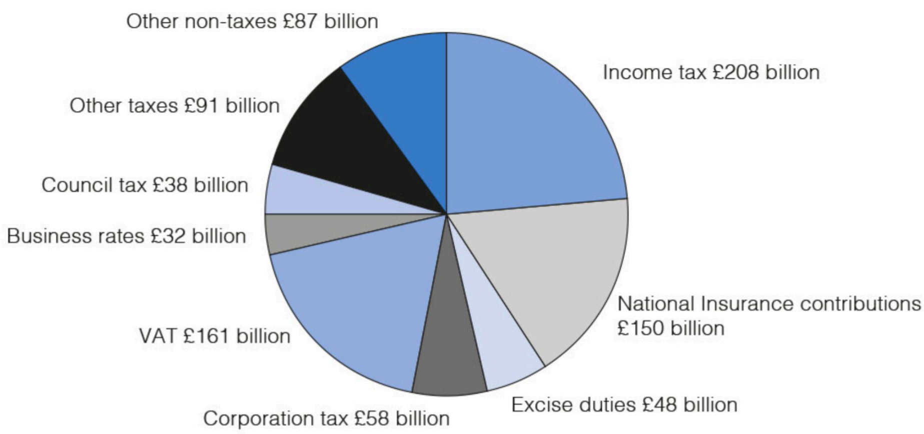
Local property taxes, Council Tax, generates £37.9Bn.

- Council tax (NMHM)

Table 4: OBR presentation of all Receipts for 2020/21
Shaded lines represent receipts included in the proposed hypothecation.

	£ bn	% revenues	% GDP
Pay as your earn (PAYE) income tax (MS6W)	175.5	20%	7.6%
Self assessed (SA) income tax (LISB + MF6X)	32.1	4%	1.4%
Inheritance (ACCH)	5.5	1%	0.2%
Capital Gains (BKST)	11.4	1%	0.5%
National insurance contributions (NICs) (AIIH)	150.2	17%	6.5%
VAT (net of VAT refunds) + VAT refunds (CTRU AHGO)	160.7	18%	7.0%
Tobacco (GTAO)	9.0	1%	0.4%
Alcohol (MF6V)	11.9	1%	0.5%
Vehicle (EKED + CDDZ)	7.3	1%	0.3%
Air passenger (CWAA)	4.0	0%	0.2%
Insurance (CWAD)	6.6	1%	0.3%
Fuel (CUDG)	27.5	3%	1.2%
Stamp (MM9F)	13.8	2%	0.6%
Shares (BKST)	3.6	0%	0.2%
License Fee (KIH3)	3.6	0%	0.2%
Climate, Environment, ETS (LSNT AHGP M98G)	12.7	1%	0.6%
Council tax (NMHM)	38	4%	1.6%
Corporation (CPSC CPSB)	59.7	7%	2.6%
Bank levy (KIH3)	1.9	0%	0.1%
Public sector interest and dividend receipts (JW2L+JW2M)	27.6	3%	1.2%
Public sector gross operating surplus (GOS) (JW2K)	57.0	7%	2.5%
Other public sector taxes and receipts (residual)	53.4	6%	2.3%
	873.0	**100%**	**37.9%**

Figure 6: Budget 2020 presentation of revenues



Figures may not sum due to rounding.
Other taxes includes capital taxes, stamp duties, vehicle excise duties and other smaller tax receipts. Other non-taxes includes interest and dividends, gross operating surplus and other smaller non-tax receipts.

Source: Office for Budget Responsibility and HM Treasury calculations.

Table 5: Reconciliation of Budget 2020 revenues with OBR Receipts
Shaded lines represent receipts included in the proposed hypothecation.
Consolidated lines from Table 4.

	£ bn	% revenues	% GDP
Income Tax	208	24%	9.0%
National Insurance contributions	150	17%	6.5%
Excise duties. including…	48	5%	2.1%
Personal excise	*39*	*4%*	*1.7%*
Corporation tax	58	7%	2.5%
VAT	161	18%	7.0%
Business rates	32	4%	1.4%
Council tax	38	4%	1.6%
Other taxes. including…	91	10%	3.9%
Personal levies	*49*	*6%*	*2.1%*
Inheritance	*6*	*1%*	*0.2%*
Capital Gains	*11*	*1%*	*0.5%*
Environmental	*13*	*1%*	*0.6%*
Other non-taxes	87	10%	3.8%
	873	**100%**	**38%**

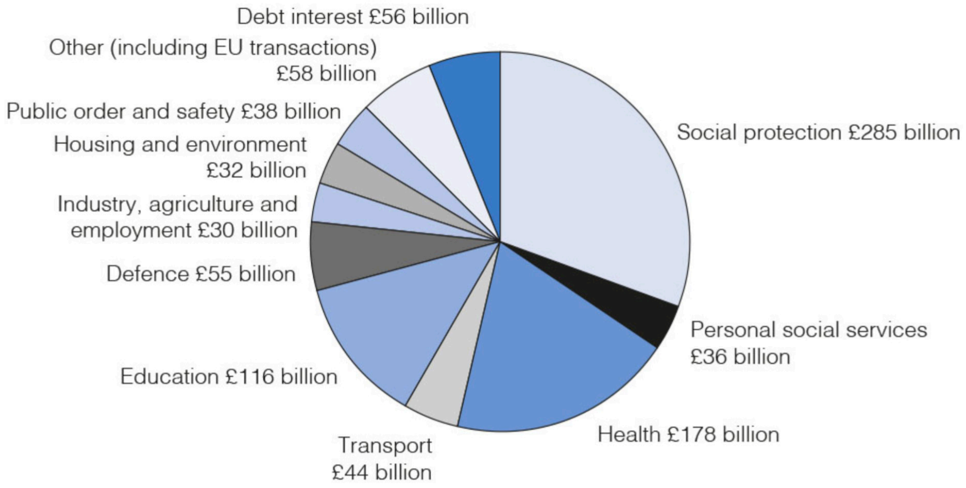
SPENDING TREATMENTS

Using the Budget 2020 report (HMT 2020b) we have identified £408Bn in spending on Universal Basic Services and £321Bn on social protection.

Table 6: Public spending breakdown from Budget 2020
Shaded lines represent spending included in the proposed hypothecation.

	£ bn	% spend	% GDP
Social protection	285	31%	12.4%
Personal social services	36	4%	1.6%
Health & Care	178	19%	7.7%
Transport	44	5%	1.9%
Education	116	13%	5.0%
Defence	55	6%	2.4%
Industry	30	3%	1.3%
Housing	32	3%	1.4%
Public order	38	4%	1.6%
Other	58	6%	2.5%
Debt interest	56	6%	2.4%
	928	**100%**	**40%**

Figure 7: Budget 2020 presentation of spending



Figures may not sum due to rounding.
Illustrative allocations to functions are based on HMT analysis including capital consumption figures from the Office for National Statistics.

Source: Office for Budget Responsibility and HM Treasury calculations.

UNIVERSAL BASIC SERVICES

These categories of spending are directly equivalent to Universal Basic Services:

- Health (Health & Care)
- Transport (Transport)
- Education (Education)
- Housing (Shelter)
- Public order (Legal services)

SOCIAL PROTECTION

These categories of spending included for social protection:

- Social protection
- Personal social services

Pensions and benefits are included in the social protection category.

REMAINDER UNHYPOTHECATED BUDGETS

The following tables summarise the £199Bn of budget items in the Budget 2020 report (HMT 2020) that would not be included in the hypothecation.

Table 7: Table of revenues and spending not included in the National Contributions hypothecation

Budget 2020 Other Revenues (non hypothecated)

	£ bn	% revenues	% GDP
Excise duties	9	1%	0.4%
Corporation tax	58	7%	2.5%
Business rates	32	4%	1.4%
Other taxes & non-taxes	100	11%	4.3%
Total revenues not from individuals	**199**	**23%**	**8.6%**

Budget 2020 Other Spending (non hypothecated)

	£ bn	% spending	% GDP
Defense	55	6%	2.4%
Industry	30	3%	1.3%
Debt interest	56	6%	2.4%
Other	58	6%	2.5%
Total spending not on individuals	**199**	**21%**	**8.6%**

ASSIGNMENTS

We have relied on the high-level categorisation of spending presented by the Treasury in the Budget 2020 report, which are, no doubt, subjective.

Our purpose here is to demonstrate that there is close enough alignment between revenues and spending to allow for a broad hypothecation, which we believe these calculations support.

We fully acknowledge that segregating revenues and spending into categories is subjective and arguable, even within the very broad criteria we are attempting to establish here. That subjectivity is inherent to the exercise and should not detract from the purpose or the objective. The distinctions would very likely be subject to political gerrymandering. Nevertheless, the relatively indisputable categorisation of 80% of all revenues and 79% of all spending means that tinkering around the edges of the assignments is unlikely to materially affect the coherence of the hypothecation.

DEFICITS

For the purposes of this report, annual borrowing (deficits) is considered part of the revenues included in the hypothecation. However, the interest burden is not included in the spending allocation. This is despite the fact that the current budget was in surplus in the 2019/20 financial year (ONS 2020).

A sustainable and empowered society meets its day-to-day safety costs from its day-to-day contributions. The proposed initial treatment of borrowing and interest in this report is acknowledged as a contraption to assist in the launch of a broad hypothecation. However, a more sophisticated alignment of debt and responsibility would be needed to avoid perverse incentives in the future.

A budget rule to phase out borrowing for current needs would be a pragmatic way to move to a fully sustainable arrangement, and avoid temptations to increase borrowing as an alternative to raising taxes.

Responding to unexpected events is not restricted by the proposed hypothecation because it applies to the use of revenues, not limits on spending. Establishing a separate public borrowing account for public services and social protection would support the budget rule and allow flexibility to respond to the unexpected. In the UK's Covid response, about two thirds of additional spending was on public services and income replacement for individuals. Assigning those costs to debt repaid from future National Contributions would make sense to most. Similarly, assigning the spending on business support to be repaid out of unhypothecated revenues would strengthen public support.

We believe that assigning the costs of public borrowing, the interest, to the responsibility of corporate and other taxes would be publicly comprehensible because much of the debt arose responding to the rescue of the financial system after 2008, even with the difficulty of assigning debts to specific periods and actions. The UK's Covid response added 14% of the current debt (Keep 2021).

ENVIRONMENTAL TAXES

We acknowledge that the extent to which the Climate levy (LSNT), Environmental levies (AHGP) and ETS revenues are directly attributable to payments by individuals would benefit from more detailed analysis.

The contribution of public services to achieving the behaviour changes highlighted by the Climate Change Committee as necessary for the UK's Net Zero by 2050 commitment (Carmichael 2019) supports the assignment of environmental revenues to the proposed hypothecation.

LOCAL TAXES

The devolution of greater control to local democratic bodies forms a critical part of the plan to reform spending and transition to sustainable prosperity (Percy 2021).

Facilitating greater local control will require the devolution of spending and revenue controls. That means that local constituencies will need control over local taxes, probably as supplements to national minimums. The practice of devolved supplementary revenues is established in the UK's devolution arrangements, and is common practice in other developed countries, such as the US.

Over time, the separation of local revenues and spending would transfer both from national hypothecation into equivalent local budget hypothecation.

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