# The real tax burden

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## Introduction

The Office for Budget Responsibility's *public finances databank* provides a valuable tool to look at the tax burden, the ratio of national account taxes to gross domestic product (GDP).

While the data provided on tax receipts is comprehensive, it necessarily measures only the burden of taxes actually paid over by taxpayers. But taxes can have distortionary effects on economic activity, lowering growth and delaying investment decisions. This reduced investment and growth stifles GDP and wages.

A 'real tax burden' includes an estimate of the difference between what actual GDP is, and what it could be if an optimal tax rate were to be introduced. Recent public debate regarding economic growth and investment along with the role of taxation and the weight of the burden, not just on individuals and families but on the economy itself, means that this research should add to the discussion.

## Key findings

- If taxes were set at the growth-maximising ratio, GDP could be £834 billion higher (£12,349 per person) three years after implementation.
- Adding an estimate of £12,349 for the lost GDP per person caused by high taxes to the £12,225 per person collected in tax produces a real tax burden of £24,574 per person.
- At a national level, this would mean adding £834 billion of lost economic activity to the £825 billion paid in taxes to produce a total tax burden of £1.7 trillion.
- As a share of GDP, this means that the real tax burden equates to 70.8 per cent, double the official tax burden of 35.2 per cent of GDP in 2021-22.
- Dividing that by a notional, larger GDP that would result from a lower tax burden would still produce a real tax burden of 52.2 per cent.
- If taxes were set to meet the TaxPayers' Alliance Single Income Tax recommendation where current receipts consume 33 per cent of GDP, then GDP would be £362 billion higher (or £5,366 per person) three years after being implemented.
- Accounting for the suppressed economic activity relative to the TaxPayers' Alliance recommended optimal ratio of taxation and spending to GDP, the real tax burden could be 40.3 per cent of a GDP estimate that is revised up accordingly. As a share of existing GDP, this equates to 43.8 per cent, substantially greater than the official tax burden of 35.2 per cent of GDP in 2021-22.
- The official tax burden for 2021-22 of 35.2 per cent is the highest since the 1950 level of 36.1 per cent. It is 6.2 percentage points more than the Single Income Tax optimal recommended ratio and 14.2 percentage points more than the growth-maximising tax ratio.
- The official tax burden for 2022-23 of 36.4 per cent is the highest since the 1949 level of 36.9 per cent. The official tax burden for 2023-24 of 37.4 per cent is the highest on record. OBR records begin in 1948 at 37.2 per cent.

## Growth is maximised when tax accounts for 21 per cent of GDP

The official tax burden only measures the tax paid over by taxpayers without considering the burden of reduced economic activity due to disincentives which go uncaptured in data. A number of studies have been conducted to understand what level of tax as a percentage of GDP would optimise growth.

This section will describe the basis on which these conclusions have been made and evaluate what level of taxation is optimal for economic growth, suggesting the impact this would have in the UK. This will be achieved by reviewing existing literature to identify the differing levels of taxation.

## A tax rate of 21 per cent is the midpoint of growth-maximising taxation recommendations

A 2009 OECD study attempted to provide a growth-maximising size of government based on general government expenditures as a percentage of GDP. This found an optimal level of 25 per cent based on a sample of 28 members of the OECD with data from 1970 to 2007.[1]

The benefit of this suggestion is the wide sample, both of countries and time period. However, there remain a number of issues which preclude this level of taxation being optimal. Firstly, the time period the report is from excludes the Eurozone crisis, coronavirus pandemic and Russia's invasion of Ukraine. In the UK alone, these events have seen public sector net debt rise from £567 billion (36 per cent of GDP) in 2007-08 to £2.4 trillion (98 per cent of GDP) in 2021-22.[2]

The report itself also notes that the assessment of optimal government size is likely to be considerably smaller, given truncated data and that as countries become more developed their governments seek the revenue-maximising level of tax.[3] This means that the results are likely to be upwardly biased.

An Institute of Economic Affairs report concurs that 25 per cent isn't the optimal tax ratio. David B. Smith writes that a ratio of government spending between 18.5 and 23.5 per cent of GDP would maximise growth in the UK, which suggests that the tax burden should match this level.[4]

Taking the midpoint of Smith's range suggests an optimal tax to GDP ratio of 21 per cent.

There may be slight changes to the tax rate range provided, depending on time and context-specific factors, such as the mobility of labour and capital.[5]

## Reducing national account taxes to 21 per cent would see GDP £190 billion higher

If national account taxes were at the growth-maximising ratio of 21 per cent, GDP would be significantly higher. James Cloyne evidenced that in the UK a one percentage point cut in taxes as a proportion of GDP causes a 0.6 per cent stimulus to GDP on impact and 2.5 percentage points after three years. [6]

Applying this to a scenario where national account taxes were 21 per cent rather than 35.2 per cent of GDP would see GDP £834 billion higher after three years.[7]

If we consider the potential economic growth missed and combine it with the total national account tax receipts HM Treasury receives, we reach an aggregate effect of our current tax regime of £1.7 trillion, or £24,574 per head.[8] Using this figure provides a real tax burden of 52.2 per cent of an adjusted GDP measure, higher than any national account tax figure as a percentage of GDP on

[1] Chobanov, D, & Mladenova, A., *What is the optimum size of government,* August 2009, p. 17.
[2] Office for Budget Responsibility, *Public finances databank – November 2022,* 17 November 2022, https://obr.uk/download/public-finances-databank-november-2022/, (accessed 17 November 2022).
[3] Chobanov, D, & Mladenova, A., *What is the optimum size of government,* August 2009, pp. 20-21.
[4] Booth, P., *Taxation, Government Spending and Economic Growth,* Institute of Economic Affairs, 2 November 2016, pg. 95.
[5] Ibid.
[6] Cloyne, J., *What are the Effects of Tax Changes in the United Kingdom? New Evidence from a Narrative Evaluation,* CESifo, April 2011, p. 2.
[7] Office for Budget Responsibility, *Public finances databank – November 2022,* 17 November 2022, https://obr.uk/download/public-finances-databank-november-2022/, (accessed 17 November 2022).
[8] Office for Budget Responsibility, *Public finances databank – November 2022,* 17 November 2022, https://obr.uk/download/public-finances-databank-november-2022/, (accessed 17 November 2022).

record.[9] As a ratio of existing GDP, it equates to 70.8 per cent, almost double the official tax burden statistic for 2021-22 of 35.2 per cent.

This lost GDP growth is equivalent to £12,349 per person,[10] which could be used by taxpayers to tackle cost of living pressures.

To achieve the growth-maximising tax level would require cutting the tax burden by 14.2 percentage points, over a third. Doing so would likely require significant cuts to public services. On a static analysis, ignoring dynamic effects, 21 per cent of 2021-22 GDP would be equivalent to £492 billion. This is £334 billion lower than actual receipts in 2021-22. After accounting for the estimated increase in GDP on impact to £2.7 trillion, tax receipts would grow to £534 billion, £292 billion lower than actual receipts. After three years of faster growth, receipts would be £667 billion, still leaving a £158 billion shortfall relative to what was actually received.

While this 21 per cent ratio might be optimised to maximise growth of GDP, it does not take account of what is best for the provision of public services for taxpayers. The proposals made in the Single Income Tax address this issue.

## A tax rate of 33 per cent supports growth and public services

The final report of the 2020 Tax Commission argued that taxes and spending should be cut to 33 per cent of national income,[11] the level chosen by respondents to our polling.[12] This section will consider the impact of reducing taxes to this level as a share of GDP, as well as wider benefits of adopting this share of taxation.

### A tax burden of 33 per cent would boost growth without cutting public services

The Single Income Tax recommends that public sector current receipts should be 33 per cent of GDP. The national account tax level required to reach this target is 29.1 per cent, a 3.9 percentage point lower level. This is the average difference between the two measurements in the last decade.[13] Therefore, national account taxes would need to be cut by 6.2 percentage points to achieve the Single Income Tax proposal of 33 per cent.

This reduction in national account taxes is considerably less, 8 percentage points, than that required to reach the growth-maximising tax burden. It represents a position reflecting a desire to significantly enhance growth and reduce the burden of tax on taxpayers while also raising sufficient tax revenues for effective, high quality public services.

In this scenario, GDP would be £200 billion higher after three years, equivalent to £2,964 per person. The missed growth as a result of the UK's higher tax rate means that relative to this scenario the real tax burden is 40.3 per cent.[14]

Without accounting for extra tax receipts arising from faster growth generated by the lower tax burden, receipts from national account taxes would be £145 billion lower at £681 billion. Faster growth should raise the receipts to £706 billion in the first year, however, £120 billion short. But after three

[9] Ibid.
[10] Office for National Statistics, *Population estimates for the UK, England and Wales, Scotland and Northern Ireland: mid-2020,* 25 June 2021, www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2020, (accessed 18 July 2022).
[11] TaxPayers' Alliance, *The Single Income Tax,* May 2012, p. 24.
[12] Ibid, p. 145.
[13] Office for Budget Responsibility, *Public finances databank – April 2022,* 28 April 2022, https://obr.uk/download/public-finances-databank-april-2022/, (accessed 18 July 2022).
[14] Ibid.

years, faster growth would mean receipts could be £786 billion, £40 billion lower. The TaxPayers' Alliance *Save to spend* recommendations amount to £43 billion, by comparison.[15]

**Table 1: real tax burden of the current tax level and hypothetical impact on GDP of different tax rates**

| Tax burden (% of GDP) | GDP (£bn) | Difference with current GDP (£bn) | Aggregated tax burden (£bn)[16] | Aggregated tax burden (% of adjusted GDP)[17] |
|---|---|---|---|---|
| 29.1 | 2,705 | 362 | 1,026 | 40.3 |
| 21.0 | 3,177 | 834 | 1,659 | 52.2 |

**Table 2: national account tax receipts under different tax rates**

| Tax burden (% of GDP) | National account tax receipts, static calculation (£bn) | Difference with tax receipts (£bn) | National account tax receipts, after three years (£bn) | Receipts less modelled receipts (£bn) |
|---|---|---|---|---|
| 34.7 | 826 | - | 826 | - |
| 29.1 | 681 | -145 | 786 | -40 |
| 21.0 | 492 | -334 | 667 | -158 |

The 33 per cent recommendation would be a more practical and realistic suggestion than the growth-maximising tax rate, as it could fund substantially greater public spending in the short and medium term while making a comprehensive overhaul of the tax system possible.

## A 33 per cent tax burden would be simpler, producing additional GDP growth and revenues

Achieving a tax burden consistent with current receipts at 33 per cent of GDP could allow the government to abolish entire taxes, thereby removing swathes of legislation and technicalities attached with it from the tax code. The 2020 Tax Commission suggested eight taxes to abolish.

Cutting the UK tax burden would relieve taxpayers of the impact of these levies, saving them money and reducing economic distortion. For corporation tax alone, its replacement with a Single Income Tax on distributed income would be simpler, improve neutrality between capital income and labour, and spur productivity growth, boosting GDP and wages in the process.[18]

This is because when taxes are high and complicated it encourages economic activity to migrate as favourable tax policy is exclusive to narrow groups, thereby restricting economic growth. The opposite occurs with a lower, simpler tax rate. Neutral taxes create a level playing field for every taxpayer to compete, removing distortions while lower burdens stimulate investment which enhances productivity growth and ultimately GDP and wage growth.

Simplification of the tax system is not completely inseparable from reducing the overall burden but both objectives are mutually complementary. Cuts make simplification easier and simplification targeted with a growth-enhancing objective makes cuts easier. Given that the UK has the world's

[15] TaxPayers' Alliance, *Save to spend,* November 2020, p. 2.

[16] These figures were calculated by adding the current size of national account taxes (£825,520,000,000) with the difference with current GDP figure for each respective tax burden. By combining these, a fuller impact of the current tax burden is realised.

[17] These figures were arrives at by dividing the aggregate total effect of the existing tax regime for each proposed tax burden level and diving it by their respective size of GDP figure. This was then multiplied by 100 to reach a fuller effect of the current tax burden as a per cent of GDP.

[18] Hammond, A & Collins, S., *Twenty taxes the UK should scrap,* Institute for Economic Affairs, March 2021, p. 5.

longest tax code, standing at 22,000 pages in 2020,[19] the amount of simplification available is significant and reform of the UK's tax structure would deliver additional GDP growth.

Higher levels of activity wouldn't be the only benefit if the UK had a 33 per cent tax burden. Encouraging growth, investment and productivity with a lower and simpler tax system also creates more revenues for the treasury. This is created by greater activity in the economy which creates new jobs and boosts wages for workers. In turn, this produces a larger pool of taxpayers paying into the treasury leading revenues to rise.

A lower tax burden could also remove loopholes in the system, which exist due to complexity, allowing individuals to avoid paying tax or exploit taxpayer funded allowances and schemes. Making tax simpler ensures that people who are currently able to avoid paying the appropriate amount of tax actually do so by reducing incentives for avoidance and evasion. Boosting compliance leads to greater tax revenues[20] which in turn helps to restore trust in the tax system.

## Conclusion

The real tax burden shows that the real cost of our current level of taxation is far greater than official statistics suggest, but it also offers the government an insight into the benefits of changing the level of tax people pay in the UK. It shows that taxpayers can keep more of their own money with a leaner tax structure while being able to boost GDP growth significantly.

A government that adopted a policy of having both current receipts and total spending at 33 per cent of GDP would not enhance growth as dramatically as a policy designed to maximise growth, But it would enable a number of other policy objectives to be achieved. First, it would be able to fund spending on public services at a scale akin to Australia or Switzerland. Second, it would enhance growth and prosperity significantly. Finally, it would enable substantial, comprehensive tax reform for a simpler, fairer, better tax system that could further enhance UK competitiveness.

This paper has shown that doing so at an optimal rate has a large positive impact on growth but may potentially not raise enough tax to maintain the public sector at its current level.

[19] Cass, I., *The UK Tax System, COVID-19 and a possible opportunity for change,* Forum of Private Business, 27 March 2020, www.fpb.org/the-uk-tax-system-covid-19-and-a-possible-opportunity-for-change/, (accessed 28 July 2022).
[20] European Commission, *Fighting Tax Evasion and Avoidance: A year of progress,* 5 December 2013, https://ec.europa.eu/commission/presscorner/detail/fr/MEMO_13_1096, (accessed 21 July 2022).