THE GROWTH COMMISSION

The Spring Growth Budget 2024

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2024

The Growth Commission

The Growth Commission is a non-partisan group of international economists analysing public policy and regulatory proposals and how they will affect GDP per capita growth in the medium to long-term.

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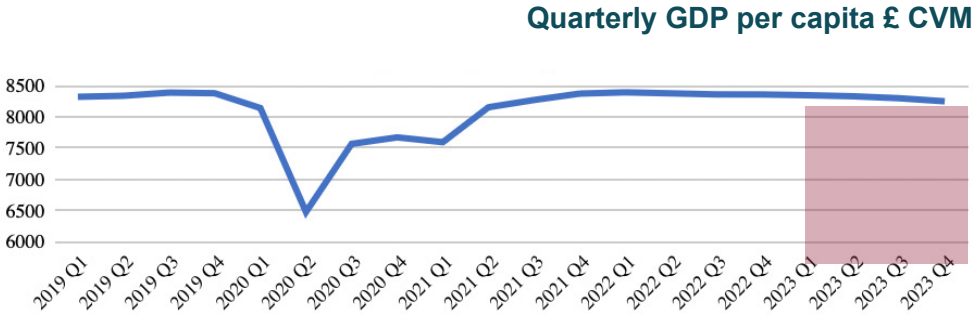
The ONS's official estimate of UK GDP per capita in 2023 was £39,356, having fallen by 0.7% compared with 2022.

Figure 1 Impact of the Growth Budget proposals on GDP per capita 2022 £

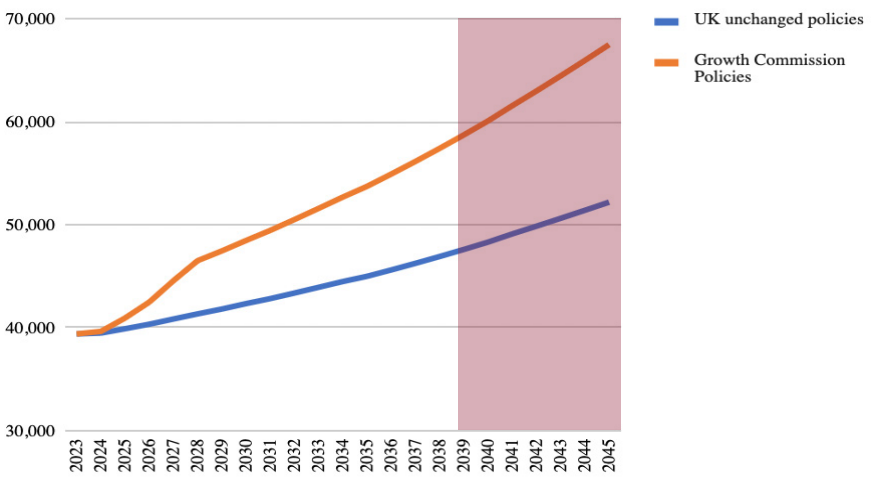


As Figure 1 shows, the U.K.'s level of GDP per capita has roughly flat-lined over the past two years and indeed is slightly lower than in 2019 Q4 before Covid. The most recent trend is slightly downwards with GDP per capita currently estimated as having fallen in each of the most recent seven quarters[1].

[1] https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/uksecondestimateofgdpdatatables

Figure 2

GDP per capita £ per annum



It is this failure of the UK economy to grow in per capita terms that is the raison d'être for the Growth Commission. And this report sets out policies which we believe will return the economy to a respectable pace of economic growth and permit GDP per capita to rise, meaning that the gap between the UK and US levels of GDP per capita will fall from the current 64% to 35% by 2045.

In this budget we describe the policy changes which we believe will be necessary to transform the economy and generate faster economic growth in per capita terms. Table 1 sets out the key policy areas and our carefully costed and quantified estimates of their impact on economic growth.

Table 1

Impact of Growth Budget policy changes on GDP per capita (per cent)

	2024-25	2025-26	2026-27	2027-28	2028-29	2044-45
Planning and housing	0.1	0.4	0.7	0.8	1.0	6.4
Energy and smart green	0.0	0.1	0.2	0.6	0.8	2.2
Labour market	0.2	0.4	0.8	1.0	1.1	1.9
Minimum wage	0.0	0.1	0.2	0.3	0.4	0.8
Infrastructure	0.0	0.2	0.4	0.6	0.8	1.4
Public sector productivity	0.0	0.6	0.1	1.7	2.5	4.4
Welfare and pensions	0.0	0.0	0.0	0.6	0.9	1.6
Abolition of inheritance tax	0.0	0.0	0.1	0.3	0.4	1.4
Lower corporation tax	0.0	0.1	0.4	0.9	1.2	2.6
Income tax reforms	0.0	0.0	0.2	0.6	1.3	1.6
Tourism tax	0.0	0.2	0.4	0.4	0.4	0.4
CBAM and other trade openness	0.0	0.3	0.6	0.9	1.2	1.5
Reduce migration to 150k	0.1	0.2	0.3	0.4	0.5	2.1
Total	0.4	2.6	5.3	9.1	12.5	28.3

Figure 3

Contribution of different policies to growth in GDP per capita in 2023 £ per capita

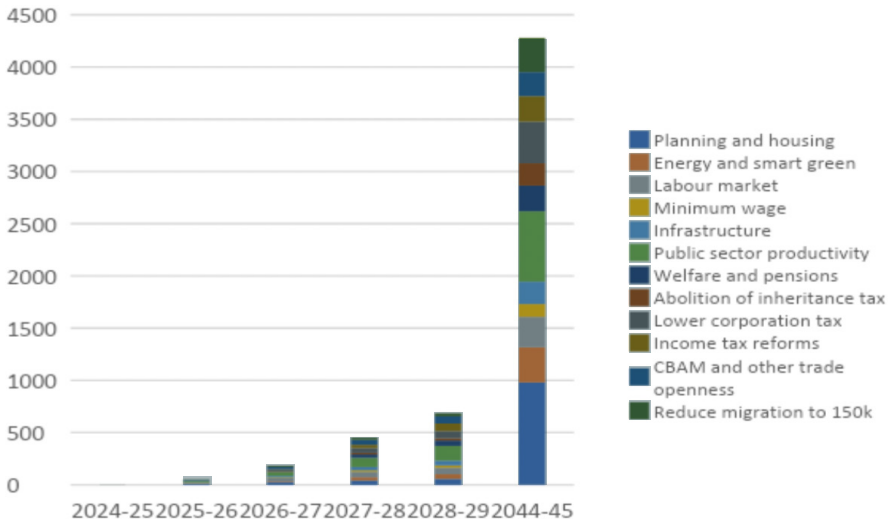


Figure 3 shows how the different policies are estimated to contribute to higher GDP per capita at 2023 prices over 20 years. The analysis shows that UK GDP per capita is currently £39,474 in 2024 and on unchanged policies at 2023 prices is forecast to rise to £51,411 by 2044.

With the Growth Commission's new range of policies it is forecast to rise to £65,982, a gain of £14,570 per person.

This is a gain worth achieving. And the following pages set out how to achieve it.

Introduction

This is the Growth Commission Spring Budget Report[2] where we put forward carefully costed proposals as an alternative approach for the Budget to be held on 6 March 2024. The report is built on modelling approaches which take into account behavioural changes likely to result from the policy recommendations and looks explicitly at the likely impact on GDP per capita over the longer term up to 20 years. The report covers:

- The economic and fiscal outlook on current policies
- Fiscal and monetary policy
- Population, migration and housing
- Microeconomic and regulatory reforms
- Tax reforms
- The impact of these reforms on both the economic and fiscal outlook in comparison with that on unchanged policies
- Appendices give descriptions of the models used and how the detailed costings have been produced

It is important that policy-makers recognise that these proposals fir together in an integrated whole and should not be picked off like choices from a menu. The details are summarised in the following.

[2] This report has been prepared mainly by Douglas McWilliams with help from Shanker Singham and Catherine McBride and approved by the whole Growth Commission (details of Growth Commission membershio are available on this web page: https://www.growth-commission.com/the-commissioners)

Summary

The economic clouds are starting to lift on inflation is falling and most forecasters are revising up their forecasts for growth and revising down their forecasts for inflation.

But there remain serious questions. In the international economy all the major economies face important challenges: China, for so long the motor of much of the world economy, is facing what might be described as growing pains; the US is growing steadily but faces high levels of borrowing and increasingly debt to GDP; meanwhile the main EU economies are growing very slowly and also face debt problems, other than Germany, although the accession states from Eastern Europe are doing rather better.

For the UK, growth seems likely to improve but only after a year when GDP per capita appears to have fallen by 0.9%.

We are concerned about the outlook for debt worldwide. Markets are unpredictable and the consequences of the current growth in debt, and especially in US Federal Government debt, are uncertain. But it is certainly a serious possibility that there will eventually be a debt crisis, most likely in the current decade.

The UK fiscal position is dominated by huge public spending overruns. Spending in the current fiscal year is forecast to be £192 billion more than was planned in March 2021. Some of this overrun is the result of higher inflation but the overrun as a share of GDP (which excludes the impact of general inflation) is 3.1%, amounting to £83 billion. If the official statistical estimates are correct, the biggest single cause of this is falling productivity. But whether these estimates of falling productivity are true or whether the government has simply spent more, the UK's problems of high borrowing and rising taxation are due to the overspend.

Without bringing public spending under control, taxes and borrowing are likely to remain high. We recommend measures to bring down both and to restore fiscal discipline to the UK.

High tax is one of the causes of the loss of growth in GDP per capita. This report contains a detailed range of proposals not only to reduce tax but also to remove the tax anomalies that lead to perverse economic consequences.

But from our calculations, even more important in causing the loss of economic momentum has been the perverse and generally unintended consequences of a huge range of government interventions that have distorted the economic environment. The planning manual for even a modest housing development contains 3,240 pages with often conflicting items of regulation. The overenthusiasm for introducing environmental legislation without proper analysis or hard-headed thinking about how best to achieve environmental outcomes has especially contributed to the damage to the economy in recent years.

Our proposals for revitalising the supply side of the economy are carefully model-based and quantified.

Migration is a political hot potato. Economically it is more simple. Our modelling shows that net migration boosts GDP, especially by encouraging creativity. But in the UK much of the beneficial impact is squeezed out in an economy with an especially blocked planning system (World Bank calculations suggest the elasticity of housing supply in the UK is only 0.3, the lowest in the developed world, compared with for example an elasticity of 1.6 in the US) by higher house prices and congested infrastructure which seem to have a negative impact on GDP. And with the impact on GDP less than proportionate, the impact on GDP per capita is negative. So lower migration, at least in the short term while the planning system is reformed, is an important ingredient in raising GDP per capita.

We estimate that the combination of our proposed measures will boost GDP per capita by 28.0% and will boost GDP by 23.2%.

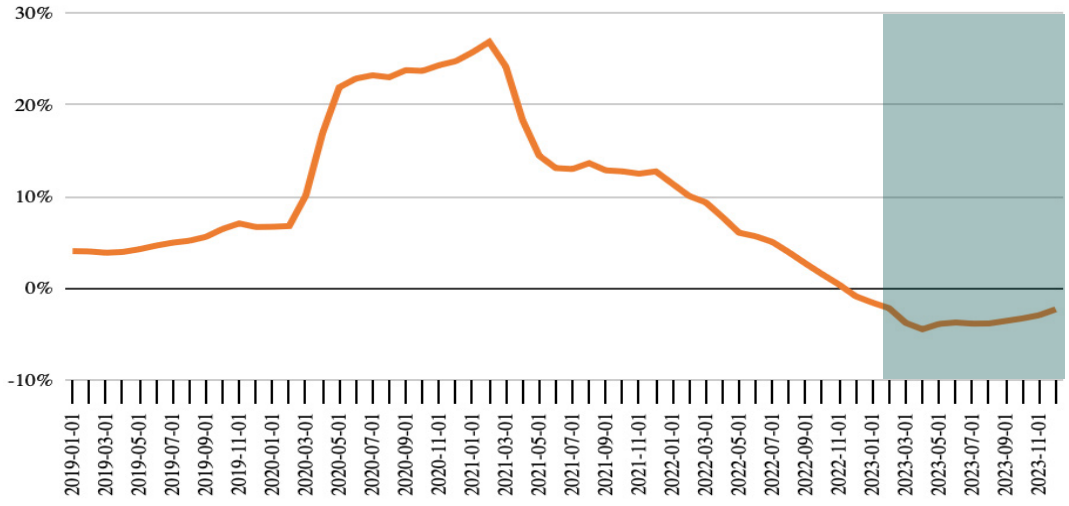
World Economic Outlook

This section has been written in conjunction with the economic consultants Cebr and uses their January 2024 forecasts as well as information from other sources, especially the October 2023 IMF World Economic Outlook. Technically these forecasts are 'most likely' forecasts and so incorporate the assumptions that policies will change. It is quite likely that 'unchanged policies' forecasts would show a less favourable outcome.

The world economy has picked up slightly more strongly into 2024 than had been expected last November, with growth surprising on the upside especially for the US, to a lesser extent for the UK and Japan and roughly in line with expectations in Asia and Continental Europe.

Figure 4 U.S monetary growth has been negative since Dec 2022

U.S. M2 annual growth



The driving force behind the better than expected data in the US has been falling inflation, which is now likely to fall to its target levels in the course of the year. This is not surprising, since the more volatile elements, oil and commodity prices, are highly subject to monetary policy and as we pointed out last November, the US has been running monetary deflation since December 2022 (see Figure 4). The result has been noticeably lower prices for many items (see Figure 5).

What has been more surprising is that against this background of monetary deflation and rising interest rates, growth has not stalled and unemployment has not risen sharply. At first sight it might appear that monetary policy has managed to reverse the trend in inflation without much impacting on levels of activity.

We believe that this has reflected two unusual factors, neither of which should be assumed always to apply. The first is that the big spike in inflation reflected one-off factors that were likely to be reversed – the supply problems associated with the ending of Covid and the Ukraine war – and as their impact on inflation went negative the headline figure moved from being boosted by special factors to being depressed by the same factors. The second is that despite monetary policy being deflationary, fiscal policy has remained expansionary, probably to an extent that only the holders of a reserve currency could get away with. And even then (see discussion of debt below) it is not clear for how long the US will be able to get away with persistent deficit financing as debt levels soar past previous records.

Figure 5

Monetary deflation has led to falling commodity and oil prices

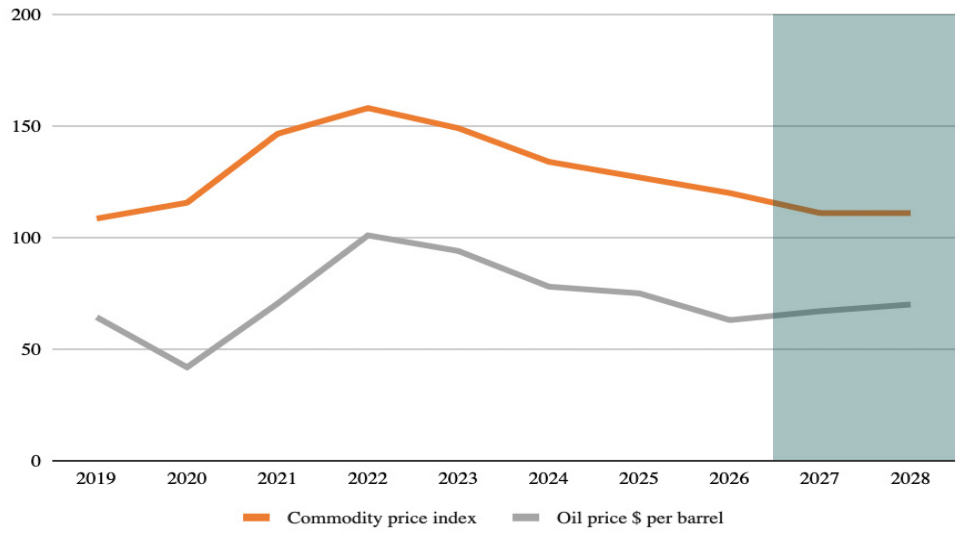
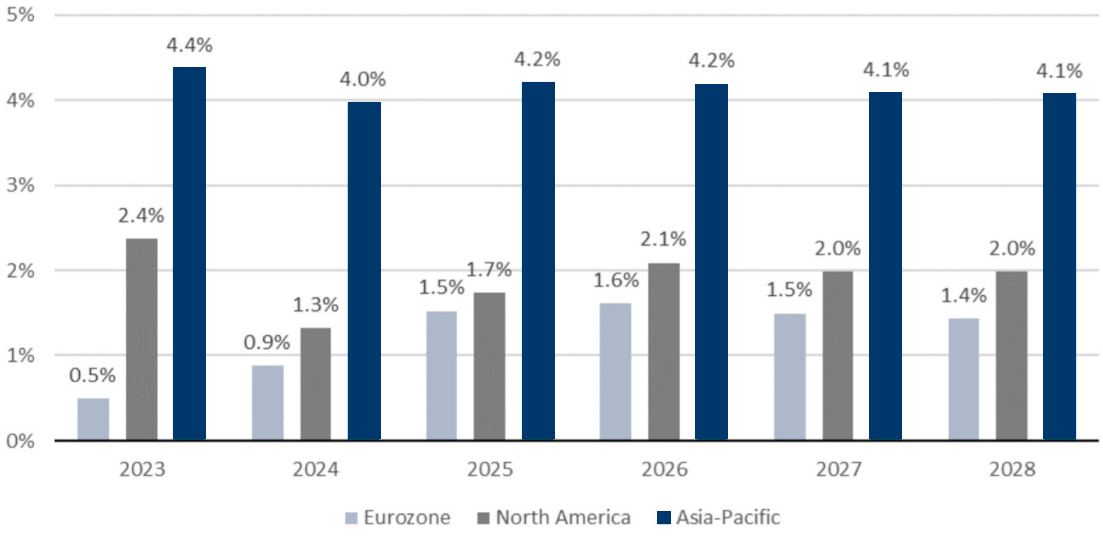


Figure 6 shows our forecasts for growth for the Eurozone, North America and Asia-Pacific. Europe still seems to be a laggard amongst the regions with growth set to underperform both this year and looking further out.

Figure 6

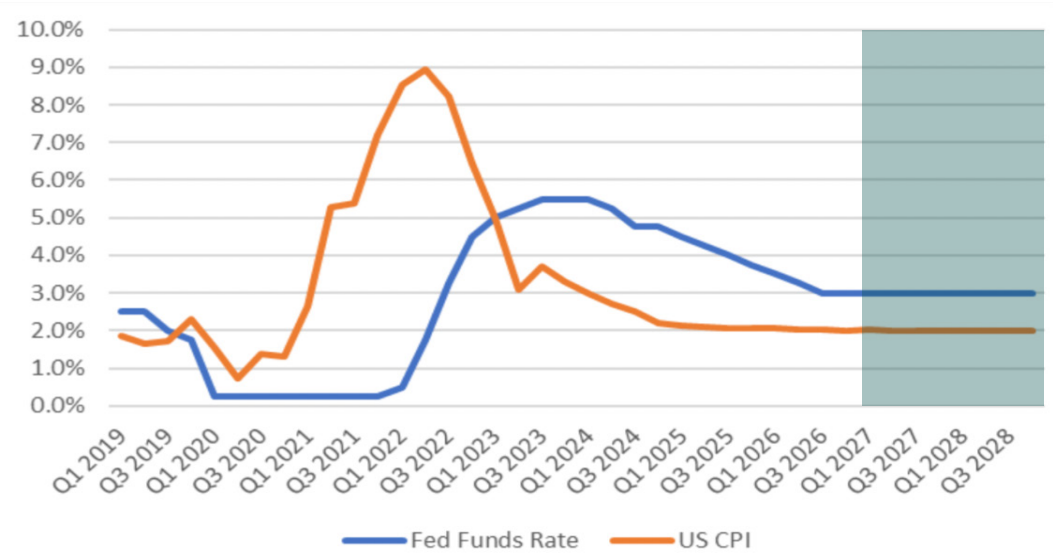
Cebr GDP growth forecast



We are expecting that the improving inflation environment will mean that interest rates are likely to fall around the world. Figure 7 shows our forecast for the Federal Funds rate which we expect to fall persistently over the next two years, reaching 3% in late 2025. We do not expect a return to ultra-low interest rates in this cycle.

Figure 7

With inflation already falling and forecast to fall further, we expect U.S. interest rates to fall also



One reason why ultra-low interest rates are unlikely is the combination of high borrowing and government indebtedness. The latest IMF forecasts were released last October but remain their most up-to-date published forecasts for borrowing and debt across the main economies. The forecasts for annual borrowing are shown in Table 2 and the forecasts for debt in Table 3, both expressed as a percentage of GDP.

The numbers have not changed dramatically since in the U.S., Japan and the U.K., although the position has probably deteriorated in Europe.

Table 2

IMF forecasts for general government net lending/ borrowing (- is borrowing) to GDP ratio (per cent of GDP)[3]

	2022	2023	2024	2025	2026	2027	2028
U.S.	-3.7	-8.2	-7.4	-7.4	-7.0	-6.7	-7.0
U.K.	-5.5	-4.5	-3.9	-3.7	-3.7	-3.5	-3.5
Japan	-6.9	-5.6	-3.7	-2.6	-2.7	-2.9	-3.3
Germany	-2.5	-2.9	-1.7	-0.9	-0.6	-0.5	-0.5
France	-4.8	-4.9	-4.5	-4.0	-3.6	-3,5	-3.6

Table 3

IMF forecasts for general government net debt to GDP ratio (per cent of GDP)[4]

	2022	2023	2024	2025	2026	2027	2028
U.S.	95.1	96.7	100.7	104.0	106.6	109.0	111.6
U.K.	98.9	99.0	99.6	97.2	96.7	96.5	96.5
Japan	161.5	158.5	155.8	154.0	153.5	153.2	153.2
Germany	45.8	46.5	45.7	44.4	43.2	42.4	41.7
France	101.4	99.6	100.1	100.0	100.0	100.1	100.4
Italy	132.7	132.6	132.5	132.4	131.9	131.3	130.6

[3] Source: IMF World Economic Outlook Database October 2023.

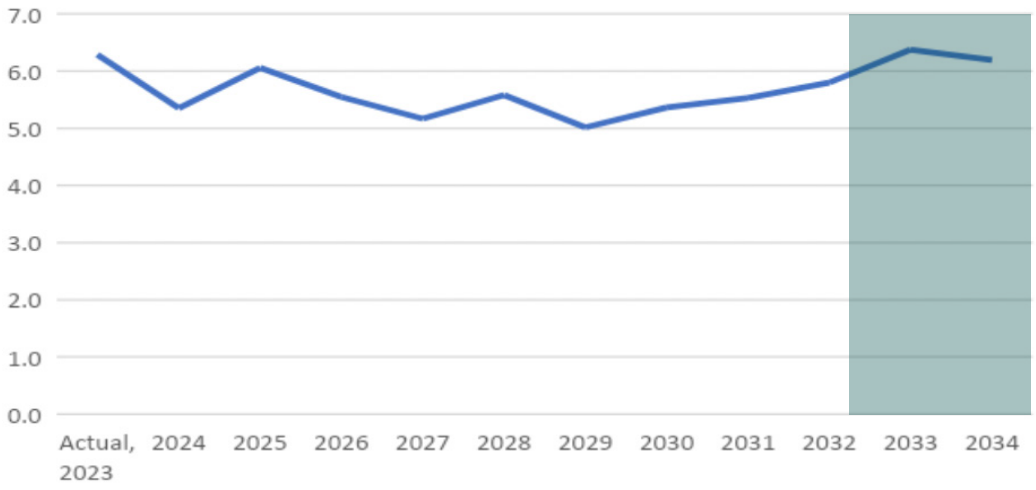
[4] Source: IMF World Economic Outlook Database October 2023.

The borrowing and debt position in the US[5] is of particular concern. As can be seen from the forecast in the top line of Table 3, the debt position is expected to continue to deteriorate throughout the forecast period.

This is reinforced by the latest projection of the Congressional Budget Office in the US, whose February 2024 forecasts are shown in Figure 8. Note that these refer only to the Federal deficit.

Figure 8

CBO projection of budget deficit as % of GDP



Moreover, 2024 is a year of particular concern for the US because roughly a third of the outstanding debt has to be rolled over. If balance sheet consolidation is also taken into account, the US is likely to have to sell about $10 trillion of government debt during the year. Meanwhile, overseas holders have been reducing their holdings of US government debt.

[5] https://www.cbo.gov/data/budget-economic-data3

In theory the scale of US debt that has to be financed is financeable. The debt ratio reached the slightly higher level of 112.7% in 1946 which is above the forecast share in 2028, though only just above. And potential bond purchasers have only a limited range of alternative investments, each with their own problems. But the combination of political uncertainty and a borrowing scenario that sees the debt ratio continuing to grow risks a rise in bond yields that will itself exacerbate the debt problem.

No entity the size of the US Federal Government has ever fully defaulted on its debt (technically the US has defaulted on its debt on four occasions by repaying in paper money rather than gold or silver as originally promised[6]) so the debt problem brings the economy into uncertain territory.

Our best guess is that the mounting Federal debt will create an economic crisis in the US at some point in the current decade which will result in policies to bring down the debt GDP ratio.

Countries other than the US will want to ensure that when this happens, their finances are in a sufficiently strong state that they do not suffer in the market turmoil.

U.K. Economic Outlook

This section has been written in conjunction with the economic consultants Cebr and uses their January 2024 Prospects Service forecasts as well as information from other sources. Technically these forecasts are 'most likely' forecasts and so incorporate the assumptions that policies will change. It is quite likely that 'unchanged policies' forecasts would show a less favourable outcome.

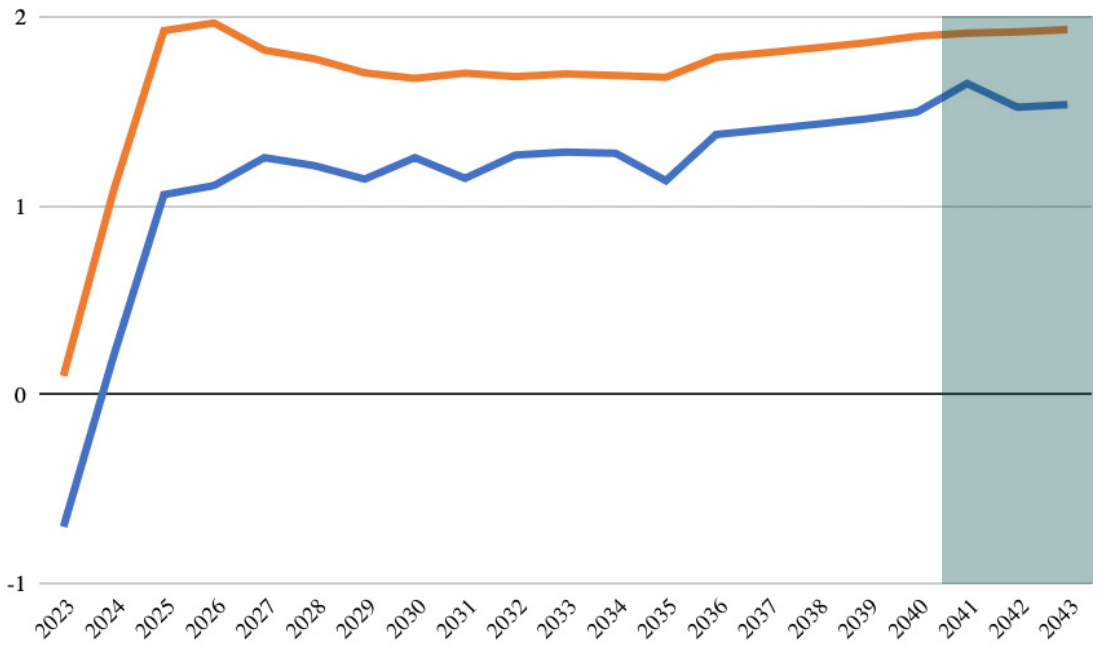
U.K. Outlook for Growth Inflation and Interest Rates

The outlook for the UK economy has improved since last November. Inflation looks likely to be lower and growth higher. During 2024 it should recover to around trend growth. The key question is how high that trend might be.

We have used Cebr's forecasts which show trend growth on the current population forecasts slightly higher than the OBR's own forecasts. These are shown on an annual basis in Figure 9. It is important to see that GDP per capita is only expected to grow at a trend slightly above 1%. And that this marks a real improvement from the decline in GDP per capita of 0.9% which we estimate to have been recorded in 2023.

Figure 9[7]

Real U.K. GDP and GDP per capita growth (per cent per annum)



The Cebr forecasts show inflation falling rapidly to 2.2% in 2025 and remaining around the target level in the following years as shown in Figure 10.

This in turn is expected to lead to falling base rates to 2% in 2031 as is indicated in Figure 11.

[7] . Source: Cebr, updated for Q4 2023 ONS GDP estimates

Figure 10

CPI inflation (annual percentage change)

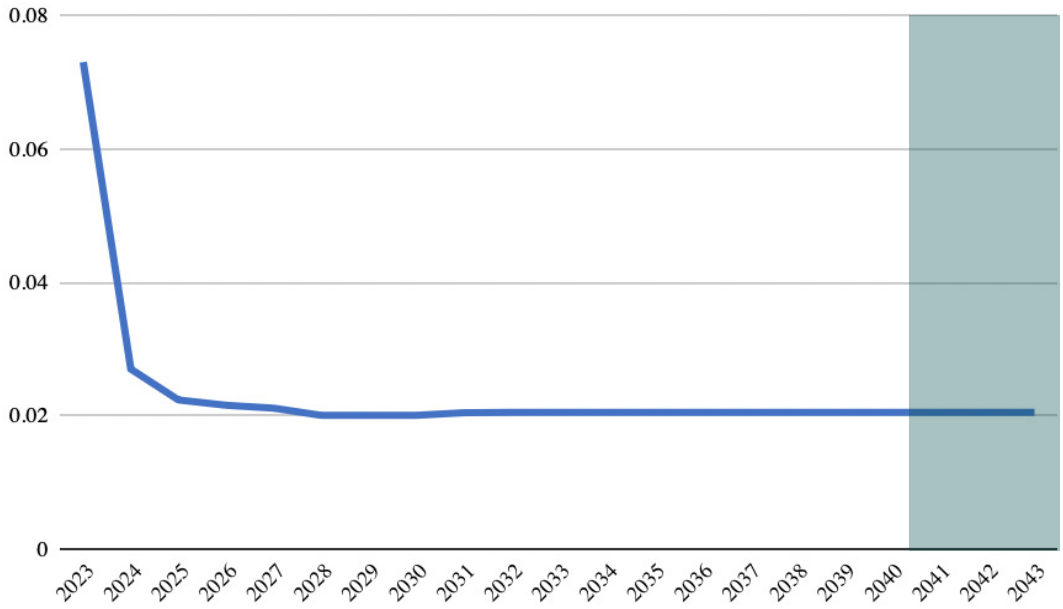
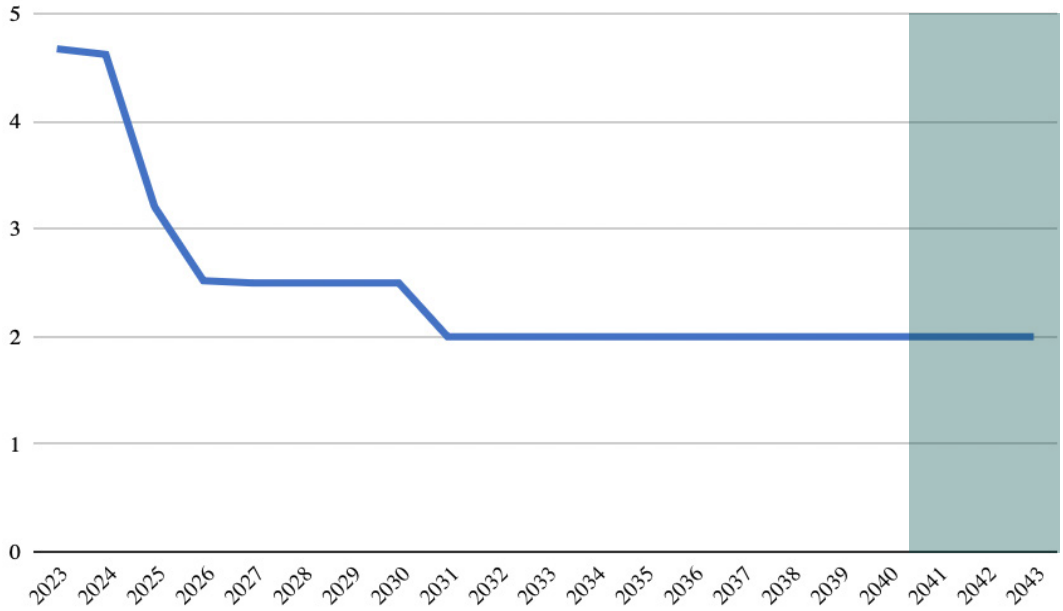


Figure 11

Bank of England base rate %



We have updated the OBR tax and expenditure plans to 2028-29 to take account of Cebr's growth and inflation forecasts. These are compared with the latest OBR plans in Table 4.

The updated forecasts show government borrowing falling slightly faster than the OBR's projections, reaching 0.2% of GDP in 2028-29 compared with the OBR's projection of 1.1%. In turn this leads to the debt ratio also falling slightly faster, reaching 88.4% in 2028-29 compared with the OBR's 94.1%.

This means that within the government's current fiscal guidance there might be slightly more headroom for policy options in the shorter term.

But the Growth Commission has always drawn attention to the longer term implications as the basis for policy.

Table 5 shows the implications of extending the OBR's forecasts into the medium term. We have assumed that receipts and expenditure remain the same shares of GDP over the years to 2044-45 as in 2028-29 – obviously as a consequence borrowing remains the same. But projecting this level of borrowing as a share of GDP at 0.2% which is well below the growth of nominal GDP means that longer term debt as a share of GDP is forecast to fall to 60.6% by 2044-45.

Table 4

Short term fiscal projections on unchanged policies

OBR November Assumptions	Per cent of GDP						
	Out-turn	Forecast					
	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Receipts and expenditure							
Public sector current receipts (a)	40.1	40.3	41.2	41.1	41.2	41.4	41.6
Total managed expenditure (b)	45.1	44.8	44.2	43.8	43.4	42.9	42.7
Public sector net borrowing (b-a)	5.0	4.5	3.0	2.7	2.3	1.6	1.1
Public sector net debt1	95.8	97.9	98.6	96.3	95.5	95.0	94.1
Growth Commission Assumptions	Per cent of GDP						
	Out-turn	Forecast					
	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Receipts and expenditure							
Public sector current receipts (a)	40.1	40.2	41.4	41.6	41.6	41.9	42.2
Total managed expenditure (b)	45.0	44.9	44.1	43.3	43.2	42.7	42.4
Public sector net borrowing (b-a)	4.9	4.7	2.7	1.9	1.5	0.8	0.2
Public sector net debt1	95.5	98.2	97.4	93.3	91.6	90.1	88.4

1Debt at end-March; GDP centred on end-March

Table 5

Medium term fiscal projections on unchanged policies

Growth Commission Assumptions	Per cent of GDP	
	Forecast	
	2028-29	2044-45
Receipts and expenditure		
Public sector current receipts (a)	42.2	42.2
Total managed expenditure (b)	42.4	42.4
Public sector net borrowing (b-a)	0.2	0.2
Public sector net debt1	88.4	60.6

1Debt at end-March; GDP centred on end-March

Fiscal and Monetary Policy

This section sets out the Commission's view about monetary policy and fiscal targets.

Monetary Policy

Monetary policy has to be sufficiently rigorous to ensure that policy is not inflationary. The current monetary policy rules and processes have failed to achieve this.

We are conscious that any monetary policy rule can be difficult to operate in complicated international circumstances, such as the period of extreme monetary policy volatility from the US during the past three years.

But even allowing for both the uncertainty generated by unexpected circumstances and external shocks like Covid and the Ukraine war, we believe that the UK Bank of England Monetary Policy Committee (MPC) has made major mistakes which appear to have been reflected in the emergence of high inflation which was initially persistent, although the reversal of monetary policy has now turned the trend on the transitory elements of inflation.

Because this inflation was predicted in advance by a range of experienced outside observers to whom the MPC have appeared to pay little or no attention, it is hard to escape the view that the problems of the MPC reflect structural causes about how the Committee is constituted.

To correct these we recommend two policy changes:

1. There should be an obligation on the Chancellor to ensure that appointments to the MPC reflect a wide range of economic views about monetary policy and that this obligation should be monitored by the Treasury Committee of the House of Commons;

2. Growth in the UK money supply (M4) should be kept within a range consistent with the inflation target. Currently this would probably imply a range of between 1.5 and 4.5% per annum growth[8].

We believe that such a monetary policy will alleviate the task of keeping inflation under control.

Fiscal Targets

The current official targets have been described in a report by the House of Commons Library on the current iteration of the Charter for Budgetary Responsibility:[9]

> *"The current Charter includes targets for government debt and government borrowing. It also includes a spending cap for welfare.*
>
> *Government debt is, broadly speaking, the stock of government's past borrowing. The target for government debt is for debt to be falling, as a % of GDP, by the fifth year of the OBR's forecast. The target focuses on public sector net debt excluding the Bank of England, which is usually described as the government's underlying debt."*

[8] Tim Congdon, one of the UK's leading monetarists, has recommended that this implies the Governor of the Bank should write an Open Letter if monetary growth becomes negative or exceeds 7 per cent, explaining why the MPC judges that such rates of growth if they occur would not be either inflationary or disinflationary. https://committees.parliament.uk/written-evidence/120080/pdf/

[9] https://commonslibrary.parliament.uk/research-briefings/cbp-9329/#:~:text=The%20fiscal%20targets,-The%20current%20Charter&text=Government%20debt%20is%2C%20broadly%20speaking,year%20of%20the%20OBR's%20forecast.

"If the Government wants to spend more than it raises from taxes and other sources of income, it borrows. The borrowing target is for government borrowing to not exceed 3% of GDP by the fifth year of the forecast period.

The welfare cap says that spending on certain items of welfare should be within a predetermined cap and margin set by the Treasury."

In effect this says that the government can borrow and get into debt to the extent that it wants with very little constraint, provided it tries to reform itself in the last year of the forecast period. Were it not for the fact that all the other major economies except Germany (which although it does not have borrowing problems of its own is effectively held back by those of the rest of the Eurozone) currently have deficit and debt problems, we suspect that the markets would not have let off the UK government's lax policies so lightly.

Our analysis of the world economy suggests there is a serious risk of the burgeoning US federal debt leading to a crisis at some point in the current decade. We therefore believe that it would be prudent for the UK to adopt a more self restrained fiscal policy than is currently set out in the Charter for Budgetary Responsibility.

The Labour[10] Party has signalled that it would keep the debt to GDP target, but revert to the target of balancing the current budget so that the government borrows only to invest. In some circumstances this might be a sensible improvement. For example, borrowing up to 4% of GDP for investment would still be consistent with debt falling as a share of national income if the current budget is balanced and nominal GDP is growing by 4% or more.

But the justification of making exceptions for borrowing for investment is that in theory such investment will permit higher GDP at a future date which will hence generate revenues that will justify the additional borrowing.

[10] See Section 3.1 of https://researchbriefings.files.parliament.uk/documents/CBP-9329/CBP-9329.pdf

In the past most public investment was allocated based on economic grounds and this argument was likely to hold. But in the modern era, it is almost equally likely that public investment is justified on social or environmental grounds. These grounds might well be perfectly valid but in themselves do not mean that GDP will be higher in the future to justify additional borrowing for such investments to be paid for from the fruits of the higher growth.

In practice it is probably too complicated to make exceptions for borrowing for investment without an unambiguous method of distinguishing whether these investments boost GDP or not.

One might make an equal case for allowing higher borrowing for tax cuts that might initially increase borrowing but ultimately reduce it by boosting GDP and hence tax revenues. Logically this should be seen as akin to investment. But again, there is a degree of uncertainty about such impacts and it probably makes sense to assume a significant fiscal dividend from higher growth only in the instances where the tax reductions are of the sort that have a good track record of lowering the required return on capital and encouraging additional capital formation, wage growth, employment, and output.

We have therefore proposed supplementing the current fiscal rules with the two additional rules:

1. that the ratio of the deficit to GDP should be on a path to fall to below 2% by 2029/30; and

2. that by 2043-44 policy should aim at gradually reducing the debt to GDP ratio to 60%.

These should still permit substantial tax cuts over the period, provided that public spending remains under control and that supply side policies are also followed.

Fiscal Headroom

Within these enhanced rules there is still scope for cutting taxes (or increasing expenditure). The best way to create fiscal headroom is to grow the economy, which creates increased scope for further fiscal action later. Our proposals will do that. But the 2% of GDP target for 2029-30 would permit £60 billion of headroom by that date, even if the economy did not grow any faster than in the base case.

We would recommend using this gradually, with about £15 billion of net tax cuts in 2024-25 and a cautious approach with an eye to looking for further fiscal dividends as the benefits of the tax cuts come through. Bearing in mind that we think a debt crisis is highly likely, we would encourage a cautious long-term approach.

Population, Migration and Housing

The Housing Shortage

A major problem in the UK is the shortage of housing. We have put forward proposals in our section on the supply side for a reform of planning rules to improve the supply of housing. But this will take time to fix.

The simplistic view that so-called "NIMBYs" are blocking housing development isn't entirely untrue, but one can hardly blame people whose facilities are already congested for wanting to impede developments unless the authorities are prepared to provide adequate infrastructure, both physical and social. Meanwhile burgeoning environmental legislation has already more or less squeezed out the small housebuilder and made building many times more difficult leading to the UK's elasticity of supply for housing being the lowest in the developed world[11].

Our proposals combine zoning reform, creating the right balance of incentives for developers and the community and creating a balance between the need to develop and the need to conserve.

But in the short term it is likely that dealing with the housing shortage will also require action on the demand side to reduce population growth. The only part of population growth that can be controlled is migration.

[11] https://www.imf.org/en/Publications/WP/Issues/2018/07/13/Fundamental-Drivers-of-House-Prices-in-Advanced-Economies-46053

Migration and Economy

We have used the modelling of the impact of the planning system from our Autumn 2023 Growth Budget to incorporate an equivalent modelling of the impact of net migration. It should be noted here that both the impact of migration on the labour force and that on housing demand are likely to reflect the composition of immigration. For example, in the UK, the recent composition has moved towards dependents and students. This both reduces the beneficial impact on the labour force and increases the impact on housing demand since single male migrants are generally prepared to economise on housing. For this exercise we have used the OBR's assumptions about the future composition of immigration.[12]

The GDP and GDP per capita impacts of migration are assumed to be the net impact of the boost to GDP from a larger workforce and the damage to GDP from the pressure on resources constrained by planning, especially housing. To calculate the impact on the labour force, we have again used the OBR assumptions from the Autumn Budget.[13]

To estimate the impact of a given change to the labour force on GDP, it is necessary to make an assumption about the impact on productivity. The most thorough study of this is a very detailed report published by the government which argues that there is little empirical evidence that immigration reduces productivity in aggregate.[14] This is consistent with the conclusion of one of the co-authors of this report in his book on the UK's then new IT sector The Flat White Economy[15] that in many creative sectors migration boosts productivity.

We have assumed constant productivity with respect to the level of migration in our model, though it would be easy to incorporate a different assumption.

[12] See Box 2.3 page 29 https://obr.uk/docs/dlm_uploads/E03004355_November-Economic-and-Fiscal-Outlook_Web-Accessible.pdf

[13] https://obr.uk/docs/dlm_uploads/E03004355_November-Economic-and-Fiscal-Outlook_Web-Accessible.pdf Box 2.3

[14] https://assets.publishing.service.gov.uk/media/5b9bdb4640f0b662e7633ef4/Campo_Forte_Portes_2018.pdf The Impact of Migration on Productivity and Native-born Workers' Training by Francesco Campo ,Giuseppe Forte and Jonathan Portes

[15] The Flat White Economy Douglas McWilliams Duckworth 2015

To estimate the impact of migration on the housing market we have incorporated our analysis on the impact of planning from our Autumn Growth Budget 2023.

We start with the official (and newly revised) population forecasts and the associated base net migration forecasts.[16] We then translate this into the projected base number of households[17] using the latest official household size forecasts (there is obviously a slight inconsistency in using 2021-based population forecasts and 2018-based household size forecasts but there is no better official data). We then compare this with a base forecast of housebuilding to obtain an 'ex ante' excess housing demand. Next we use standard elasticities to translate that into house prices[18] ; and then we use standard supply elasticities[19] to calculate the potential supply response in the housing market and solve simultaneously.

Simulations and Different Rates of Net Migration

Subsequently we investigate various different potential net migration assumptions to establish their impact on housing demand, house prices, GDP and GDP per capita.

The translation of house price rises into impact on GDP is based on the analysis in the Growth Commission's Autumn Growth Budget which in turn is partly based on a CBI report on the impact of planning[20] which has a 9.4% excess price of housing reducing GDP by 1.9%.

Some might ask why high house prices might reduce GDP. One answer is that the net impact (mainly of higher rents) is a transfer from those with a high propensity to consume to a rentier class with a low propensity to consume. Our modelling also concludes that factors that tend to boost inflation tend to lead to an economic equilibrium with lower GDP.

[16] The 2021 based interim projections https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2021basedinterim

[17] This is done using the most recent official household size projections https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/householdprojectionsforengland

[18] We have assumed an elasticity of 2 with respect to ex ante excess demand

[19] IMF Working Papers Fundamental Drivers of House Prices in Advanced Economies Nan Geng July 13, 2018 https://www.imf.org/en/Publications/WP/Issues/2018/07/13/Fundamental-Drivers-of-House-Prices-in-Advanced-Economies-46053 proposes an elasticity of supply with respect to price of 0.3 for the UK

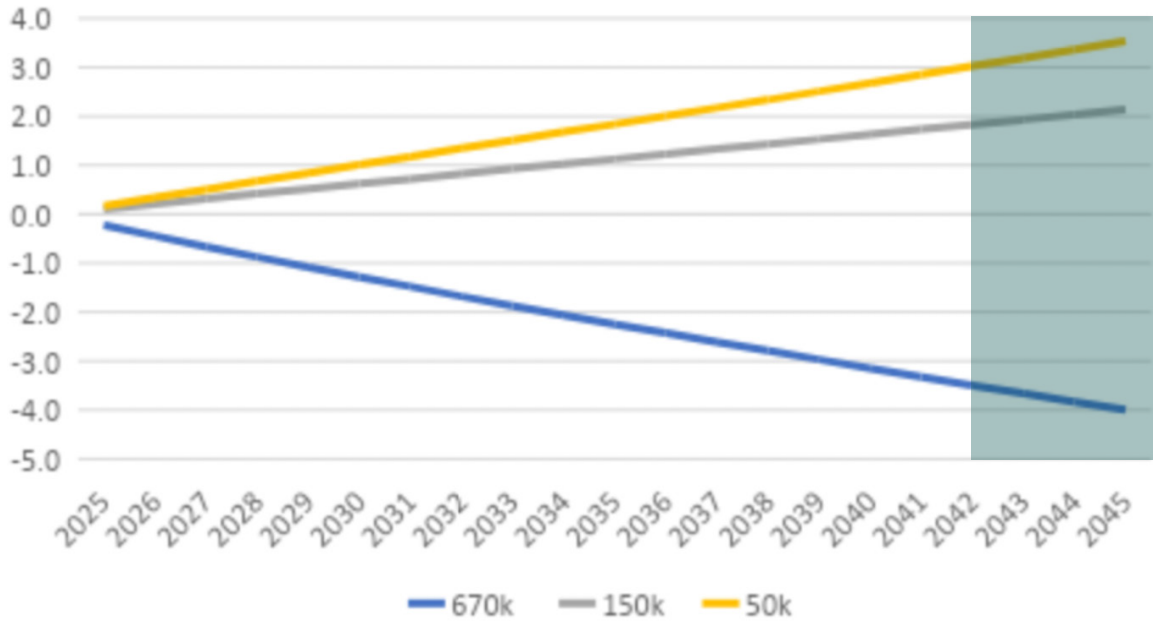
[20] Shaping the Nation, CBI

These conclusions are very much affected by the low elasticity of supply of housing in the UK. One would expect that the potential negative housing market implications from immigration in the US would be substantially less since the elasticity of supply of housing in the US is more than five times more than in the UK.[21]

The simulations show that after allowing for housing supply, a continuation of the current rate of net migration would boost real house prices by 2045 by 10.9%; but a fall to 50,000 a year would reduce prices by 12.9%.

Figure 12

Percentage impact of different annual migration levels on GDP per capita



[21] Economic and Fiscal Impact of Immigration | National Academies This is why US studies would be likely to show much less unfavourable impacts on housing etc from immigration

Figure 13

Percentage impact of different annual migration levels on GDP

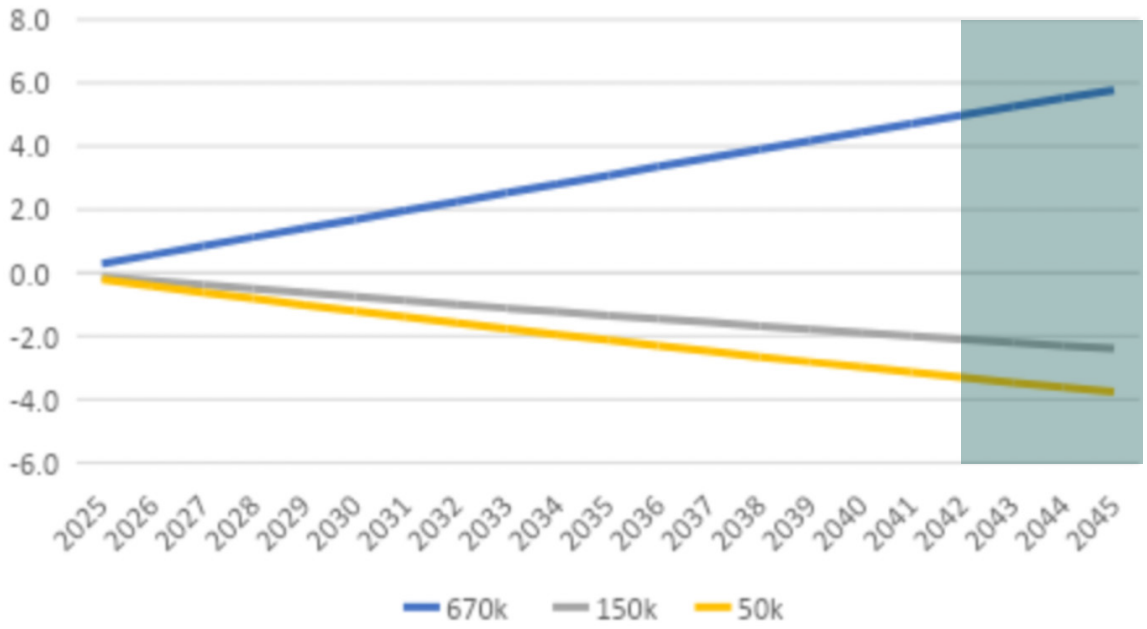


Figure 12 and Figure 13 show the estimated impacts of different rates of migration on GDP and GDP per capita to 2045. They compare a continuation of the current rate of migration in the year to mid-2023 (670,000) with the base assumption in the most recently released population estimates (315,000 annually from 2028) and with migration dropping to either 150,000 or to 50,000.

The projections show (as might be expected) that the higher the rate of migration, the higher the level of GDP. A continuation of the current migration rate boosts GDP compared with the base assumption by 5.8% in 2045; a reduction to 150,000 per annum reduces GDP in 2045 by 2.4% while a reduction to 50,000 per annum reduces GDP in 2045 by 3.8%.

But the picture for GDP per capita is the reverse: a continuation of the current migration rate cuts GDP per capita compared with the base assumption by 4.0% in 2045; a reduction to 150,000 per annum raises GDP per capita in 2045 by 2.1% while a reduction to 50,000 per annum raises GDP per capita in 2045 by 3.5%.

Policy Conclusion

In theory this makes a case for the lowest possible migration target. But it must be remembered that it is the level of GDP, not GDP per capita, that drives fiscal revenues. In addition there are non-economic factors to be taken into account. Moreover one of our other proposals, to liberalise the planning regime, would increase the elasticity of supply and hence reduce the damage through the route of migration creating housing shortages.

We conclude on balance that a short-term target of reducing net migration to 150,000 for at least a temporary period would help the housing market, raising GDP per capita by 2045 by 2.1% while limiting the erosion of the tax base from slower growth.

This policy conclusion could be revisited if and when the planning system has been revised to make housing demand more responsive to demand.

Supply Side Better Regulation Package

Introduction

To achieve economic growth at a pace that will generate significant gains in living standards, we need to unblock the economic arteries that have been gradually clogged up over recent years by anti-competitive regulations.

We have therefore put together a carefully costed pack of regulatory and other supply side reforms which together are likely to achieve higher growth. This in turn, together with holding down public spending to more sustainable levels, will generate the scope for tax cuts without risking higher interest rates or higher inflation.

The package is composed of four elements:

1. A reform of planning rules to permit not only much higher rates of house building and hence cheaper housing, but also much more competition - especially in hospitality and in retail. At the same time the substantial planning delays for infrastructure and energy projects need to be drastically reduced.
2. An energy and smart net zero package to achieve the net zero targets in a way that does minimal damage to the economy.
3. A labour market package to improve the operation of the labour market.
4. An infrastructure package to improve the operation of roads and rail and their interoperability.

In addition, we also propose reform of the regulatory process so that regulatory impact assessments are properly carried out, ***taking into account specific impacts on trade, competition and property rights protection***; are considered in Parliament ***in advance*** of regulatory decisions and are annually reviewed in Parliament post-implementation.

We also suggest that regulatory impact assessments include core principles such as ensuring regulation does as little damage to the three economic classifications "pillars" that support our ACMD[22] analysis as possible – these are trade openness, competitive markets and property rights protection. The principle should be that regulation should be promulgated that does the least damage to these core pillars consistent with a publicly-stated and legitimate regulatory goal. Our ACMD model shows that if this principle is respected we are most likely to see GDP per capita increases. This section considers the importance of regulation before describing the key elements of the supply side better regulation package.

The Importance of Regulation

Domestic regulations can have an effect on how markets work, and can introduce market distortions that impact competition negatively. We have developed an econometric model to evaluate the impact of these Anti-Competitive Market Distortions (ACMDs) which correlates regulations that have negative impacts across three dimensions of international competition (trade openness), domestic competition (market competition behind the border) and property rights protection with GDP per capita, a measure of productivity. By evaluating the specific areas where the UK is a weak performer or where its scores have declined more recently, we can make some assessments of the areas where regulatory reform is needed and what the GDP per capita effect of that reform actually is.

[22] The ACMD (anti-competitive market distortions) model is the micro model described in Appendix 1

We have focused on those areas where there is a convergence between areas in which the UK is a poor performer and those arterial sectors where the effects of improvements are at their greatest (see Growth Commission papers 2 and 3). The model is described in Appendix 1.

The model also significantly finds that movements in countries' scores (over a 118-country, nine-year set of panel data) do correlate with changes in log (GDP per capita). By itself, this is an important finding. Each pillar/index has a series of sub-variables that track with policy choices in specific areas. These sub-variables are weighted based on a STATA analysis, except for the domestic competition pillar where all factors are equally weighted. This paper identifies those areas where the UK is a significantly poor performer compared to its peers which is where gains can be made. It is important to say at the outset that there does need to be a holistic and general approach to regulation in the round.

Our models have revealed that optimising the UK's score in the Domestic Competition Index could potentially boost GDP per capita by 5.9%-6.4%[23]. Similarly, maximising scores in the Property Rights Index and International Competition Index could result in GDP per capita increases of 4.0%-6.8% and up to 2.2%, respectively.

Optimisation means that the UK merely raises its performance to that of the highest-performing country. It is of course possible for the UK to achieve an optimal score in these three pillars which would mean a much higher GDP per capita realisation, but we have elected the lower optimisation method for the reason that since another country has achieved it, there is nothing in principle that would prevent the UK from doing so as well. These results are generally aligned to what others have projected for different countries. This shows firstly that competition in regulation is not just an optional extra but rather a fundamental requirement to a growing economy.

[23] This represents the GDP per capita increase from an improvement in the index to the same level as the best performing country. The lower end of the range is the result from a model which controls for both country and time fixed effects whereas the higher end of the range is given by the model with country fixed effects.

We have noted in Growth Commission Papers 2 and 3 that distortions in the arterial sectors of the economy can have much more pernicious impacts than other sectors because these effects can be amplified across the whole economy. We have therefore focused on some key arterial sectors, and can show how improvements in these sectors simply to the level of the best global performer can lead to significantly higher GDP per capita than is generally thought possible.

Regulation and Growth Duty

The Growth Commission has already submitted responses into two January consultations on regulation and the growth duty[24] . While the GC supports the idea that regulators should consider the impact of their actions on economic growth, we think that should be narrowly tailored to impact on trade openness, competition and property rights protection and should draw from our work on the three pillars of growth (our ACMD/micro-economic model). We think that confusing the economic growth duty with other objectives such as net zero or environmental sustainability, worthy though they may be, will serve only to render the analysis of regulatory impact on economic growth worthless. We strongly support the idea that one policy tool should aim at achieving one policy choice, and problems occur when one tool is expected to deliver multiple (often conflicting) policy choices. We were therefore concerned by the direction of travel of some of the questions in these consultations which suggested unhelpful conflation of multiple objectives into the definition of economic growth.

The ACMD/Micro Model allows policy-makers to consider the effect of regulatory decisions on GDP per capita by looking at their specific impacts on trade, competition and property rights, and we strongly suggest that the government utilise this tool in evaluating the economic effect of policy.

[24] https://www.growth-commission.com/post/response-to-the-consultation-on-growth-duty Accessed 15/02/24

Planning and Housing

UK planning regulation has dramatically increased in complexity in the last a couple of decades. The result has been very little progress on house building. Applying the distortions model to planning, we find that planning improvements will lead to improvements on the competition pillar which translates to the following GDP per capita gains. There are a number of policies that would contribute to this GDP per capita gain figure.

Planning and housing policies to reduce the cost and time to register property could result in an improvement in the Property Rights Index. This could in turn lead to an increase in GDP per capita of 0.2% to 0.4%.[25] Similarly, the Domestic Competition Index could increase through an improvement in the "Regulatory Quality" sub-component, which is based on the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Improvement in these sub-scores could lead to increases in GDP per capita of up to 0.3-0.4%.[26] These are small, however, compared with the potential gains that might accrue from improving planning.

Housing

The CBI/RICS task force on planning 'Shaping the Nation'[27] estimated that the capital cost of the excess price of houses caused by planning restrictions was £78 billion at 1987 values, causing an annual loss to the economy of 1.9% of GDP.

[25] This represents the GDP per capita increase from an improvement in the sub-score to the same level as the best performing country.

[26] Same as above. It should be noted however that many factors other than housing and planning policies also impact regulatory quality.

[27] CBI, Shaping the Nation: Report of the Planning Task Force, November 1992

Studies quoted in *The Economist*[28] show significant crowding out impacts from high house prices, damaging the growth of the rest of the economy. In the US a very detailed micro study looking at bank branches found that a one-standard-deviation increase in house prices in areas where a bank has branches reduced lending growth to firms that borrow from the same bank by 42%. The total investment undertaken by the affected firms fell by 21%.[29] Similarly, a study from China showed that based on data from manufacturers in 172 Chinese cities, a 50% increase in property prices would raise borrowing costs, reduce investment and productivity, and result in a 35.5% decline in the firms' value-added output.[30]

Liam Halligan in his book Home Truths[31] and in his evidence to the House of Commons Housing, Communities and Local Government Committee has recommended additional measures to support housing including the charging of penal rates of Council Tax on land with planning permissions which have not been built on and a 50-50 rule for sharing the value of property uplift from planning permissions between the local authority and the developer.[32]

Since we prepared our policies last Autumn there has been more research carried out into the issues affecting planning. It is clear that the massive amount of legislation affecting planning makes it difficult (and in some areas almost impossible) to develop, especially for housing.

The House of Lords Built Environment Committee has now reported on the impact of environmental legislation on planning and development. This contains 74 key recommendations. Perhaps the most important are that the requirement to develop be given the same statutory importance as environmental protection:

> *'The Government should place the need to deliver housing on a statutory footing equal to that of environmental protection' and that 'the Government should commission a review into the cost implications of satisfying environmental regulations for both housebuilding and large infrastructure projects'.*

[28] https://www.economist.com/finance-and-economics/2022/07/28/how-high-property-prices-can-damage-the-economy

[29] MacKinlay, Andrew, Chakraborty Indraneel: Housing Price Booms and Crowding-Out Effects in Bank Lending, University of Miami; Itay Goldstein' University of Pennsylvania; Virginia Tech, Journal of Financial Economics 2018 https://finance.wharton.upenn.edu/~itayg/Files/realestatebubbles-published.pdf

[30] Hau, Harald and Ouyang, Difei, How Real Estate Booms Hurt Small Firms: Evidence on Investment Substitution (May 2, 2018). Swiss Finance Institute Research Paper No. 18-38, Available at SSRN: https://ssrn.com/abstract=3174761 or http://dx.doi.org/10.2139/ssrn.3174761

[31] Halligan Liam, Home Truths: The UK's chronic housing shortage - how it happened, why it matters and the way to solve it, Biteback Publishing November 2019

[32] https://committees.parliament.uk/writtenevidence/2743/pdf/33

[33] Built Environment Committee 'The impact of environmental regulations on development' 2nd Report of Session 2022-23 - published 21 September 2023 - HL Paper 254

To get some sense of the mass of conflicting regulations affecting planning, it is worth looking at the planning inspectorate's training manual which has become available following a Freedom of Information request. This comprises 3,240 pages. The index is set out in Table 6 which shows the huge range of different considerations affecting planning in the UK. To build a responsive and competitive planning system it will be necessary drastically to prune these. We also note that none of these bodies have a growth duty, as they focus on prudential concerns. This means that statutory consultees can intervene late in the planning process and then essentially slow processes down as local councils fear judicial review of their decisions. Applying the same type of growth duty as we suggest for other regulators above would go a long way in ensuring that processes are not unduly slowed and that the chilling effects of judicial review are minimised to reasonable levels.

[34] https://drive.google.com/file/d/1kv0HF-tRipzT41fN7w6WE8WSt6f_V-_81/view

Retail and Hospitality

The McKinsey study commissioned by Gordon Brown attributed the bulk of the 40-50% of the productivity differential in the hospitality and retail sectors in the UK compared with the US to the inefficiencies and lack of competition caused by the planning system.[35] This implies a loss of productivity in these sectors alone equal to about 3% of GDP.

Other Sectors

In general we recommend the adoption of an Australian-style zoning system for planning with the presumption that planning applications should be successful, provided that they are in line with zoning.

We recommend speedier resolution of planning issues through a range of policy tools. First we suggest the concept of a trusted developer for whom expedited planning is possible. Second, where a planning application is in line with the zonal planning system, we suggest an expedited review where if a decision is not made within 6 weeks, planning permission is deemed to have been granted.

The UK currently has a discretionary, regulatory approach to planning as opposed to a zoning approach. There have been some suggestions of the UK moving to a hybrid approach involving elements of zoning and discretion (MHCLG paper in 2020).[35] The UK could also apply concepts like outline planning permission for known and trusted entities. The MHCLG paper does envisage automatic outline planning processes, and suggests some ideas typically found in zonal approaches to planning.

[35] McKinsey Global Institute Driving productivity and growth in the UK economy October 1, 1998 Report

[36] MHCLG (2020). White Paper: Planning for the Future. Ministry of Housing, Communities & Local Government. Available at: https://www.gov.uk/government/consultations/planning-for-the-future

The MHCLG paper also advocates the greater reliance on technology and electronic submissions as opposed to the paper-based system still used in UK planning. A one-stop shop for planning processes would also simplify the process.

There does need to be a much simpler process for analysing the environmental impact and the specific role of statutory consultees. At the moment since statutory consultees have no growth duty and only a prudential concern, there is no incentive for them to move quickly or to consider economic effects in their submissions. There is also no incentive to input their views on a timely basis, and the reality is their comments very often come in at the latest possible stage, slowing the process down considerably. Local councils are also deeply concerned about the possibility of judicial review and this creates a culture where it is easier to say no to development than to allow it. Once again, if courts were required to consider the economic growth impact of proposed development, this would shift the burden regarding planning processes and judicial review.

For large projects of national importance in particular we recommend streamlined planning that will reduce planning delays by at least 75%.

Smart Net Zero and Energy

Energy costs are higher in the UK than they need to be and impose a substantial excessive cost on the economy, damaging its competitiveness.

Net zero is an important issue but is impeded by offshoring production to other countries with fewer environmental protections.

We first look at energy costs in the UK compared with other countries. Figure 14 shows that the UK's household energy costs are relatively high (other than in comparison with Germany). This partly reflects the UK's low score for set-up costs for electricity shown in Figure 15.

Figure 14

Comparative energy costs by country

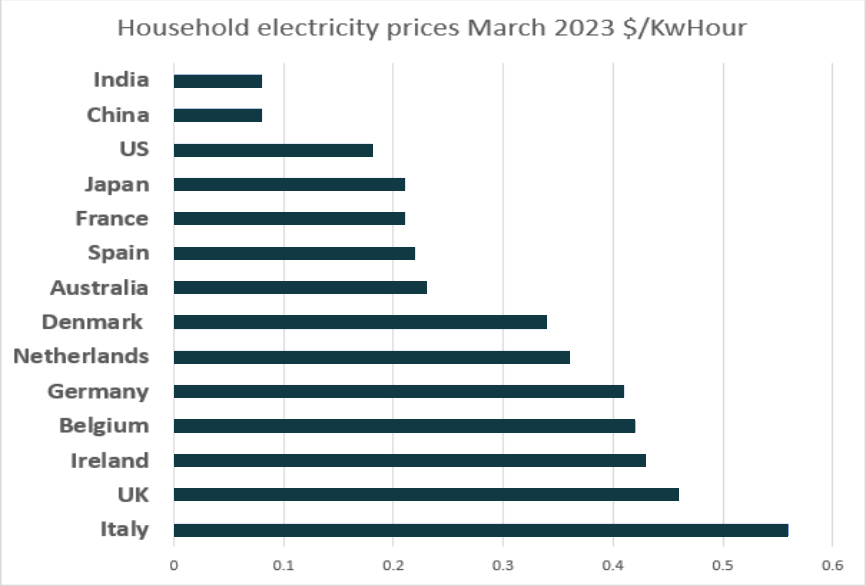
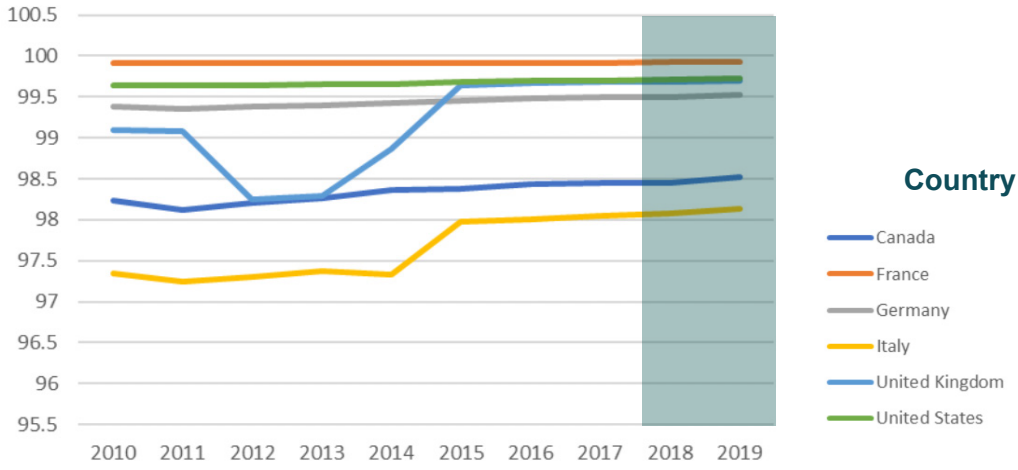


Figure 15 Scoring for relative cost of setting up electricity for SMEs in different countries

Relative score (0-100) of set up cost of electricity for small to medium size businesses



High energy costs result from a number of different policies. These include environmental taxes, levies and other costs associated with the Climate Change Act, 2008. But high energy costs are also attributable to anti-competitive interconnection policy, as well as anti-competitive legacy effects of the manner in which the UK electricity industry was privatised in the first place.

There was a lack of competition at the generation level to start with and the monopoly transmission and distribution company, the National Grid Company, remains a monopoly even now.

The CMA did look at the energy sector with specific emphasis on competition.[38] The CMA noted that in addition to social and environmental costs, network costs were a significant contributor to wholesale energy cost (the primary driver for ultimate consumer cost). The CMA found evidence of anti-competitive effects in the manner in which 'Contracts for Difference' have been allocated. At a high level, CfDs are designed to skew investment in favour of low-carbon projects, and the ability under the Energy Act of 2013 to avoid the competitive process when awarding CfDs has indeed been found to be anti-competitive.

The CMA report noted that there is evidence of inefficient financial allocation of resources in support of certain low-carbon technologies which has had a detrimental effect on price to consumers. Uniform charging for transmission losses (losses which occur when electricity is transported around the country) does lead to a system of cross-subsidisation which distorts competition between generators, creating negative impacts on competition and higher prices.

At the retail level, the ban on regional discrimination has had a negative effect on competition, leading to a widening gap between retail prices and marginal cost. The CMA also notes that the Retail Market Review ("RMR") reforms of 2010 had a significant, negative impact on competition. Specifically, by limiting tariff offers in order to "simplify" the overall offering to customers, the RMR has actually dampened competition, led to a decline in innovation and resulted in higher costs for consumers.

[37] For more detail see 'Market Distortions in Privatisation Processes', Singham (Routledge 2022),

[38] Competition and Markets Authority 2016, Energy market investigation Final report https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf

Some of the remedies the CMA sought to introduce were questionable (a price cap for pre-payment customers recognising that prices had gone up due to anti-competitive effects). The CMA noted (considering the regulatory system for energy):

> *"The rules and regulations governing energy markets are set out in legislation, licence conditions and codes. These regulations have a profound effect on the nature and form of competition in both wholesale and retail markets, and we are therefore concerned that some key aspects of the structure and governance of the regulatory framework – including the roles and responsibilities of institutions and the design of decision-making processes –increase the risk of policies being developed in the future that are not in customers' interests and inhibit the development of policies that are in their interests. We also consider that elements of this framework have contributed to the lack of trust in the sector that many parties have highlighted in the course of our investigation."*

The CMA report also set forth deep concerns with Ofgem's regulatory approach. In relation to its duties, Ofgem stated that the competition duty had been progressively downrated relative to other duties over the last ten years. It expressed concern that, if they suggested it should change its policies towards improving competition, our conclusions and remedies might be difficult to reconcile with the current structure of its duties.

One could regard it as a significant cause for concern that Ofgem considers that these duties impose a constraint in practice on its ability to pursue competition-based policies (for example, through placing a priority on approaches that do not promote competition) particularly since we consider that Ofgem has taken some decisions that have not had the effect of promoting effective competition, including: the decision not to approve the introduction of locational charging for transmission losses; the decision to prohibit regional price discrimination; and the decision to introduce the simpler choices component of the RMR reforms.

However, the CMA accepted that the fault did not solely lie with Ofgem as the then Department of Energy and Climate Change (DECC) had indicated it would take matters into its own hands if Ofgem did not apply anti-competitive regulation in effect forcing its hand. The political system therefore responded to political pressures by imposing anti-competitive regulation on consumers.

The CMA also concluded:

> *"Climate and energy policies have to balance the competing objectives of: reducing emissions; ensuring security of energy supply; and ensuring energy prices are affordable. We have considered whether a lack of independent scrutiny of such policies – and the policy trade-offs within them – might be one of the factors that increases the risks of inefficient policy design in the future."*

The CMA was also concerned that the six large operators did not have good financial accounting systems that provided the transparent information needed for competitive markets to actually work:

> *"Overall, we have found that a combination of features of the wholesale and retail energy markets in Great Britain give rise to an AEC through an overarching feature of a lack of robustness and transparency in regulatory decision-making which, in turn, increases the risk of policy decisions that have an adverse impact on competition. More particularly, we have found that: (a) Ofgem's statutory objectives and duties may constrain its ability to promote effective competition; (b) there is a lack of a formal mechanism through which disagreements between DECC and Ofgem over policy decision-making and implementation can be addressed transparently; (c) the impact of government and regulatory policies over energy prices and bills has not been effectively communicated; and (d) there is a lack of a regulatory requirement for clear and relevant financial reporting concerning generation and retail profitability."*

And with regard to voluntary codes (i.e. agreements between the main operators):

> *"We have found a combination of features of the wholesale and retail gas and electricity markets in Great Britain that are related to industry code governance and which give rise to an AEC through limiting innovation and causing the energy markets to fail to keep pace with regulatory developments and other policy objectives. These features are as follows: (a) parties' conflicting interests and/or limited incentives to promote and deliver policy changes; and (b) Ofgem's insufficient ability to influence the development and implementation phases of a code modification process.*
> *This is further evidence of incumbents organising the market in ways that damage consumers."*

The CMA concluded that:

> *"319. The problems we have identified relate to the processes, structures and institutions involved in regulatory decision-making in the energy sector. They are systemic in nature, having an impact across all of the energy markets that we have identified. While the detriment arising from these AECs is, by its nature, difficult to quantify, we consider that it is likely to be very substantial.*
>
> *"320. First, the costs of energy policies – the transfers and subsidies put in place to achieve government policy objectives such as reducing greenhouse gas 75 emissions – will comprise an increasing proportion of customers' energy bills. On the basis of current announced plans, DECC estimates that climate and energy policies will add 37% to the retail price of electricity paid by households in 2020.18 Further, some policies – such as the roll-out of smart meters – are expected to improve energy efficiency and hence reduce energy bills. Given the central role that government policies are expected to play in determining energy bills in the future, we believe it is vital that policy decisions are robust, and informed by a transparent analysis of their impacts on customers.*

"321. Second, energy markets are highly regulated, and the nature of competition in these markets is shaped by the design of the regulatory regime to a much greater extent than in most other markets. This is particularly the case for wholesale markets, which currently comprise around 50% of the costs faced by electricity and gas customers, and where the nature and size of technological and regulatory changes expected over the next few years are substantial. We also note that many of the competition problems that we have identified in the retail energy markets – the settlement systems for gas and electricity, which fail to give suppliers the right incentives, the introduction of the RMR simpler choices reforms, which have stifled innovation – are regulatory in nature, reflecting specific provisions in legislation, licence conditions and industry codes."

Competition in energy markets is picked up by the ACMD model in the following sub-variables: Cost of electricity and Time to get electricity. Improving those to the highest-scoring country is associated with a GDP per capita increase of 0.3%-0.4%.[39] In addition we have used the macro model to understand the impact of reducing energy costs on the economy overall.

Trade and Energy

The UK government has stated it will have a similar approach to carbon leakage as the EU, namely a Carbon Border Adjustment Mechanism. This would require a tariff to be placed on a specific set of goods that are said to be carbon intensive in their manufacturing process:

1. Iron and Steel
2. Cement
3. Fertilisers

[39] This represents the GDP per capita increase from an improvement in the sub-score to the same level as the best performing country. The lower end of the range is the result from a model which controls for both country and time fixed effects whereas the higher end of the range is given by the model with country fixed effects.

4. Aluminium

5. Electricity

6. Hydrogen

The tariff has not been fully determined yet and goes into effect in 2026, but will be based on the difference between the carbon price paid by EU producers under the EU Emissions Trading System (ETS) and the carbon price (if any) paid by producers in the exporting country. The UK is set to follow suit, but the consultation on precisely how the UK's system will work will take place this year (2024) so the final design of the system cannot be set out. However, a blanket tariff applied to these goods will certainly have an impact on the trade openness pillar as well as the competition pillar. Given the importance of these key input products on the market as a whole, it is likely that increased costs will have a serious impact on the UK market as a whole. Assuming a 0.5 point reduction on the trade pillar, and a weighting of 29% for trade freedom, we would assume a 1% GDP per capita impact over a five-year period. Since electricity cost has a weighting of 6.2% of the competition pillar, and a weighting for energy costs, we would assume a further reduction in GDP per capita of 0.4%-0.6% over the same five-year period. We therefore assume a 1.5% GDP per capita reduction over five years, approximately 0.3% GDP per capita reduction year on year for this period. To put this in perspective, the Growth Budget (2023) included a mix of targeted tax cuts, and a regulatory reform package amounting to a 1% year on year increase in GDP per capita over twenty years.

There are other ways of dealing with the issue of climate change and carbon leakage that are less damaging to a country's trade and competition pillar scores, and thus its GDP per capita. One suggested approach can be found in the recommendations of the Trade and Agriculture Commission which applied a tariffication mechanism in the event that a petitioner could show a market distortion that had damaging effects on competition, and could also demonstrate causation and damage.

A distortion could be inferred if a country were deliberately deviating from an agreed international agreement for trade or investment advantage. This recommendation was widely agreed by the NFU, consumer groups and environmental NGOs engaged on the Commission. Such a mechanism which would more effectively focus the tariff on the actual harm caused, and would evaluate it by reference to its effect on competition in a relevant product and geographic market, would have limited trade and competition effects, certainly much less damaging than the proposed EU CBAM.[40]

We should note that the EU is not the only jurisdiction that is promoting trade outcomes that reduce free trade. The US is promoting trade policies that also attempt to achieve domestic objectives e.g. in digital trade.[41]

Labour Market

One area where the UK is a poor performer in the ACMD model is in the area of labour market flexibility. The UK's 2019 score is 5.4 whereas the highest performer, Singapore, is 1.5 points above the UK, which is a significant difference.

Labour market flexibility is a particularly important element of the domestic competition pillar because it relates to the voluntary exchange of the provision of labour between a willing seller of that labour and a willing buyer. Lack of flexibility in these arrangements ties the hands of both buyer and seller in these cases. Of course, labour protections to prevent abuse and exploitation are necessary, but the data suggests that the UK's comparatively poor scores in this area are holding back its economy, and the balance between labour protections and voluntary exchange in the provision of labour services is more restrictive in the UK than is optimal. Returning the UK to a better balance, one more in line with international best practice could unlock significant amounts of GDP per capita.

[40] The TAC proposal can be found at Trade and Agriculture Commission – Final Report March 2021 (publishing.service.gov.uk) specifically at the Annex on the tariffication mechanism proposed.

[41] The Story Behind Biden's Trade Failure - WSJ

The policies holding back the UK's score in this part of the model are:

- Minimum wage
- Associational right
- Paid annual leave
- Notice period for redundancy dismissal
- Severance pay for redundancy dismissal
- Labour force participation rate
- Restrictions on overtime work
- Redundancy dismissal permitted by law

If the UK were to optimise[42] its score in labour market flexibility, it could expect an associated increase of 4.6%-5.1% in GDP per capita. We assume that it will not be practical to implement all the policies that might bring the UK into line with Far Eastern economies but even catching up with Australia would raise GDP per capita by 1.9% (see Appendix 2). The following policies would contribute to that gain in GDP per capita that correlate to the factors listed above.

1. Lower notice period and severance pay for redundancy dismissals.
2. Efforts to improve labour force participation rate.
3. Eliminate restrictions on overtime work by deleting the EU Working Time Directive from the U.K. statute book.
4. Allowing firms to dismiss employees more easily if business conditions require it.
5. Adjust the minimum wage level.

[42] This represents the GDP per capita increase from an improvement in the sub-score to the same level as the best performing country. The lower end of the range is the result from a model which controls for both country and time fixed effects whereas the higher end of the range is given by the model with country fixed effects.

The UK government is considering efforts to bring the cohort of workers in their fifties back into the workforce. Reform of the UK's redundancy laws would also contribute significantly to GDP per capita. It should be pointed out that onerous redundancy laws prevent firms from hiring workers (because of the cost of having to make them redundant), and this particularly affects smaller firms.

Transport Infrastructure

The quality of transport infrastructure is an important arterial sector which has a significant impact on GDP per capita. There has been much debate in the UK on the quality of its rail sector, but we should note that most journeys in the UK are made by car. Quality of roads is a sub-variable which is part of the ACMD index.

If the UK optimised this sub-variable, we would see an associated 0.68%–0.75% GDP per capita increase. The UK scores particularly poorly in this sub-variable with a score of 4.9 in 2019, compared to Singapore's peak performance 1.8 points higher.

Although quality of rail is not a sub-variable in the ACMD index, we can make some observations with regard to rail and some recommendations as to how to improve the competitive environment here.

As in other sectors, the CMA has made recommendations regarding improving competition in the market for passenger rail services.[43]

The rail sector in the UK was privatised in the 1990s, but competition problems remained[44], because the government remained in control of the network itself, and regional monopolies were created that did not compete.

[43] CMA, 2016, Competition in passenger rail services in Great Britain, A policy document https://assets.publishing.service.gov.uk/media/56ddc41aed915d037600000d/Competition_in_passenger_rail_services_in_Great_Britain.pdf

[44] Singham Shanker, Market Distortions and Privatisation Process, (Routledge 2022)

The lack of on-rail competition has been highlighted by the CMA's report on increasing competition in the rail sector in 2016. Because Network Rail is owned by the government and charges access fees for use of the track to rail franchisees, there is a possibility of ACMDs applying to the access charges (rather like interconnection charges in electricity). In-market competition is quite limited (where you have multiple franchisees for a single route). But this is precisely the competition that will have an effect on price and cost. The decision in 2001 to reduce the number of franchisees has severely limited this competition. CMA acknowledges that on-rail competition would have significant competition benefits for both price and service. Cost reductions for on-rail competition are suggested to be around 29%. More on-rail competition could also put pressure on Network Rail to ensure appropriate capacity on the network itself and thus reduce access costs.

On-rail competition is important and difficult as incumbent franchisees will tend to resist it as they will benefit from lack of competition and will wish to preserve the status quo.

It is noteworthy that none of the CMA 2016 recommendations have been adopted and, on the contrary, far from being a candidate for on-rail competition, East Coast Main Line has been taken back into public ownership in 2023.

Much of the CMA's findings have been superseded by the Williams-Shapps[45] Review in 2021. The proposal is for Great British Railways to run the system, own the network (as the government does now) and, critically, receive the fare revenue. This is the first competition problem. On-rail competition is completely thwarted if the measure of success (revenue) is not actually received by the relevant operating company. It also appears that the lessons from the energy sector are not being drawn. It is supposed that consumers prize simplicity above price and cost reductions, and the learning from the energy market is that simplicity brings less choice and higher prices. A false choice between simplification and nationalisation is presented as if this is the only choice available, completely at odds with the recommendations of the competition regulator.

[45] Great British Railways: Williams-Shapps plan for rail The government's plan to transform the railways in Great Britain. Department for Transport, May 2021 https://www.gov.uk/government/publications/great-british-railways-williams-shapps-plan-for-rail

We therefore recommend that rather than renationalisation and the recommendations of the Williams-Shapps review, we would recommend more utilisation of "on-rail" competition, and franchising which we believe would lead to better services and lower prices for consumers.

With regard to roads, improving road infrastructure can unleash significant GDP per capita benefits. East-West connections are as important as North-South connections and improving among towns and cities in the UK that do not involve London-centric networks will be important.

Ultimately it is unlikely that modern modes of propulsion can be implemented without moving to a more modern system of financing roads through user pricing.

Another report on road pricing[46] identified two major constraints to its introduction:

1. After many years where governments have appeared to be anti-motorist, road users do not trust governments to impose additional charges on road users – hence the ongoing reaction against any increase in fuel duty;
2. There might be a temptation for the government to create an artificial shortage of road space to help maximise the user price that could be charged and most road users are suspicious that the government would thus abuse any power it had to charge based on scarcity.

It also suggested solutions to these problems through:

1. A user authority representing those who pay for and use the roads only, to oversee the road pricing mechanism and ensure the money (other than that paid to the government in 2) below) is spent on roads.
2. A 'Barnett' formula working out the share of the road pricing revenue that should be taken by the government.
3. The rest of the revenue should be reinvested in improving the road network.

[46] Cebr, Abolishing Traffic Jams, 2017 https://cebr.com/reports/the-future-of-road-transport-abolishing-traffic-jams/

Subsequent calculations suggested that these reforms could raise capacity by at least a third and reduce accidents by 90%. It also calculated a potential gain to GDP of 3%.

Public Spending

the £192 billion overspend

Introduction

Public spending in most advanced economies rose as a share of GDP between 2019 and 2020 by an average of 8% (see Figure 16). But the chart shows that the rise in the UK was higher than in other comparable countries though this result is distorted by the UK's different approach to measurements of some elements in GDP which meant that over the Covid period GDP both fell faster initially and then rose faster subsequently.

Figure 16

Rise in government spending as % of GDP in selected countries between 2019 and 2020 (source IMF)

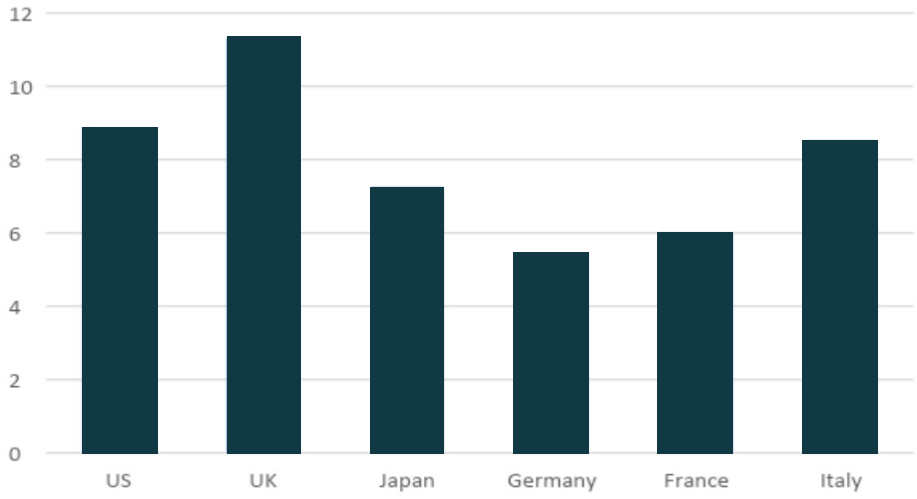
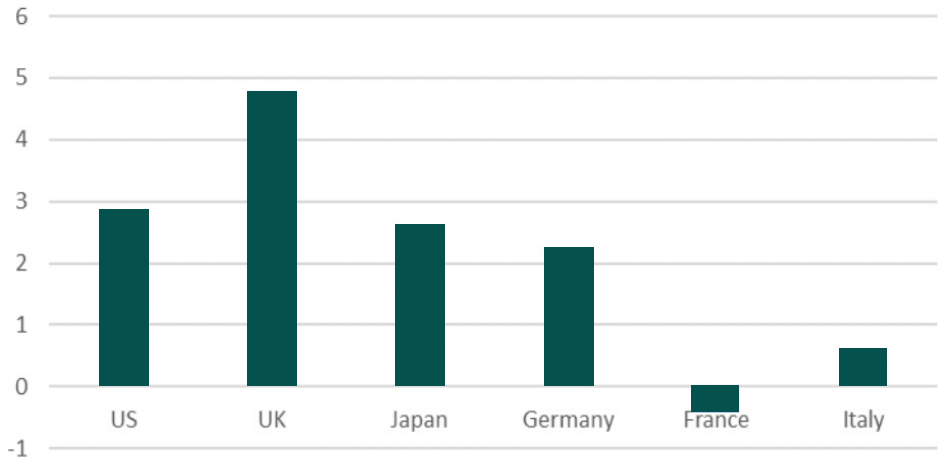


Figure 17

Rise in government spending as % of GDP 2019-28 forecast by IMF



A more accurate indicator of comparative trends is shown in Figure 17, which shows the IMF's latest published estimates for the changing share of public spending as a share of GDP for the same countries from 2019-28, where the Covid effects should disappear from the calculation.

Table 7 and 8 give some insight into what has been happening for public spending in the UK. Table 7 shows how, even after the main impacts of Covid were over, the OBR was forecasting spending in March 2021 rising from £992 billion in 2022-23 to £1,112 billion in 2025-26. But by their latest forecasts last November shown in the same table these estimates had risen to a rise from £1,154 billion in 2022-23 to £1,265 billion by 2025-26. The annual overruns range from a projected £153 billion in 2025-26 to an astonishing £192 billion in 2023-24.

Table 7

Public spending overruns - change in OBR predictions of U.K. government spending March 2021 compared with November 2023

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Total managed expenditure March 2021	885.2	1,140.9	1,053.3	992.3	1,030.1	1,068.7	1,111.5
Total managed expenditure November 2023				1,151.4	1,222.3	1,236.8	1,264.5
Overrun				159.1	192.3	168.1	153.1

Table 8

Public spending overruns as % of GDP

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Total managed expenditure March 2021	39.8	54.4	46.5	41.8	41.9	41.9	41.9
Total managed expenditure November 2023				45.0	44.9	44.1	43.4
Overrun				3.2	3.1	2.2	1.5
GDP nominal £ billions (GC forecast)				2,557.6	2,719.4	2,824.2	2,946.7
Overrun as % of GDP in cash terms £ billions				82.8	83.3	61.4	44.3

Table 8 looks at this from a different perspective – comparing the forecasts of public spending as a percentage of GDP in each of the forecasts and then translating the changes to a cash sum. The overrun reduces to £83 billion in 2023-24, which might be taken as a proxy for that part of the overrun that is not associated with inflation. Why has spending risen so sharply?

There is a clue in Figure 18. This shows the ONS's estimates for movements in public service productivity since 2019. The latest data for Q3 2023 shows public service productivity down 6.7% from the 2019 average. As the chart shows, the recent data shows public service productivity at best flatlining and an unsympathetic observer might note that the latest data seems to show public service productivity declining again after an initial post-Covid bounceback.

It is well known that measuring public service productivity is difficult (the challenges of measuring productivity in the public sector are well known from the Atkinson Review[47]) so it behoves any analyst to be cautious about placing too much weight on the productivity data alone.

[47] Atkinson, Anthony B. (2005) The Atkinson review: final report. Measurement of government output and productivity for the national accounts. Palgrave Macmillan, Basingstoke, England. ISBN 9781403996466

But the spending overruns indicated in Table 7 and in Table 8 are real, whether caused by declining productivity or spending incontinence. And the comparative data shows that the growth in spending in the UK is high by international standards.

Figure 18

ONS data for public sector productivity[48]

We have a range of suggestions for public spending:

1. Understand the reasons for the apparent fall in public sector productivity since pre-Covid and reverse them where possible;

2. Take advantage of technology to modernise public services;

3. Make criteria for welfare and all benefits more stringent to reverse the growth in numbers on sickness benefits – this could clearly involve additional support to help get people on benefits back to work;

[48] https://www.ons.gov.uk/economy/economicoutputandproductivity/publicservicesproductivity/datasets/publicserviceproductivityquarterlyuk

4. Raise infrastructural investment on energy, transport and housing; and

5. We have left some additional scope for increasing spending more generally to improve public services where demographic changes indicate likely increases in demand.

Public Sector Productivity

Our proposals are that the fall in public service productivity over the period since 2019 is reversed over four years while for subsequent years growth in productivity of 1% per annum can be achieved through the use of digital and other technologies.

Welfare and Pensions

Welfare plays a crucial role in our society in making life less difficult for those who have been less fortunate.

There will always be loopholes in welfare systems. There is evidence that more people are claiming disability benefit than in the past, and the rise in the number of claimants seems to be associated with increasing claims relating to stress and mental health where the proof of disability is less objective than with claims for physical disability.

The IFS has pointed out that between mid-2021 and 2022 the monthly number of new claimants of disability benefits rose from 15,000 a month to 30,000 a month.[49]

[49] [Accessed Oct 2023] https://ifs.org.uk/news/number-new-disability-benefit-claimants-has-doubled-year

Meanwhile their estimates indicated that the share of working-age adults in receipt of disability benefits increased from 2% (591,000) in 1992–93 to 5% (1.8 million) in 2012–13 and 6% (2.3 million) in 2021–22[50].

New data just released backs this up, showing that the total number claiming out-of-work benefits by August 2023 had returned virtually to its Covid time level of 5.6 million.[51] Meanwhile revised estimates of those out of the labour force from long-term sickness (of working age) has risen sharply, by 725,000 since pre-Covid to a new record level of 2.8 million.

Self-assessment of health has indicated a deterioration in health[52], if not on the same scale as the increase in disability. But the huge rise in disability will be destabilising for the public finances if it continues and in an ideal world should be understood and if possible reversed.

It is a plausible assumption that post-Covid the criteria for eligibility for sickness-related benefits have been relaxed – if so these should be tightened. But we have not incorporated any assumed financial savings here until the position is better understood.

Meanwhile the UK pension age, currently 66, is set to rise to 67 within the next 3 years and to 68 by 2044. The Growth Commission's experience from Japan is that a rising pension age can make a significant contribution to the economy and a future paper from the Commission drawing on this experience will look at the issue further.

[50] [Accessed Oct 2023] https://ifs.org.uk/sites/default/files/output_url_files/WP202224-Living-standards-of-working-age-disability-benefits-recipients-in-the-UK-2.pdf

[51] https://www.spectator.co.uk/article/too-many-people-in-britain-arent-working/

[52] [Accessed Oct 2023] https://ifs.org.uk/news/number-new-disability-benefit-claimants-has-doubled-year

Infrastructure

In our supply side analysis we have argued for increased resources to be devoted to housing, transport and energy.

While much of this is likely to be generated in the private sector, it would be prudent in our funding calculations to make provision for some public sector funding. We have allocated 1.5% of GDP by 2030 to additional public funding for infrastructure.

Improvement in Public Services

We have allocated an additional 2% of GDP for spending where appropriate on improved public services, especially those where demand is likely to grow for demographic reasons.

Higher defence spending is also likely to be required in the medium term and some of the additional 2% of GDP will need to be devoted to this.

Taxation

Introduction

This section describes the Growth Commission's tax package. It covers corporate taxation; personal taxation; inheritance tax and tax-free shopping.

Tax Competitiveness

The OECD measures tax (and other government receipts) as a share of GDP for all qualifying economies.[53] Its latest data shows that the planned UK tax levels as a share of GDP for 2025 show the largest increase from the historic average (1997-2007) of any economy except three. Of the three, Korea and Japan started from much lower bases and still have much lower tax to GDP ratios than the UK; the other economy is Greece which has had to raise taxes as a result of well known financial difficulties associated with its Euro membership.

The increase has taken the UK from being one of the lower tax economies to an economy with a medium level of taxation as a share of GDP. The UK has moved from being the 8th lowest out of 31 economies to the 16th lowest.

But the UK's tax competitiveness position is rather less attractive than the data for its tax burden would indicate. Every year the Tax Foundation compares the tax competitiveness of various countries. As recently as 2017, the UK ranked 14th and above all its larger competitors.[54] But since then, our relative position has declined. In the latest comparison, the UK now ranks 30th out of the 38 countries studied and behind all major competitors except France[55].

[53] https://www.oecd.org/economy/outlook/statistical-annex/

[54] [Accessed Oct 2023] https://taxfoundation.org/research/all/global/2017-international-tax-competitiveness-index/

[55] [Accessed Oct 2023] https://taxfoundation.org/research/all/global/2023-international-tax-competitiveness-index/#:~:text=The%20International%20Tax%20Competitiveness%20Index%20(ITCI)%20seeks%20to%20measure%20the,world%2C%20capital%20is%20highly%20mobile.

Looking at the sub-components of the index, the only area where the UK scores well is in its cross-border tax rules. On corporate taxes, individual taxes, consumption taxes and property taxes the UK ranks 26th or lower. We have taken into account the UK's declining tax competitiveness in putting forward our main proposals.

The contrast is with Estonia which is top of the Tax Foundation's tax competitiveness index. Estonia's tax competitiveness is based on four key features: it has no corporate income tax on reinvested and retained profits (and a 14-20 per cent corporate income tax rate on distributed profits). This means that Estonia's corporate income tax system allows companies to reinvest their profits tax-free.

It has a flat 20 per cent tax on individual income. The tax is not applied in the case of distributed dividends that have already been taxed with a corporate income tax (see above). Its property tax applies only to the value of land, rather than to the value of real property or capital. It has a territorial tax system that exempts 100 per cent of foreign profits earned by domestic corporations from domestic taxation, with few restrictions. Clearly the UK has some distance to go to match the Estonian system.

Personel Income tax, Inheritance Tax and Corporate Taxes

There has been much discussion about what to do with the potential 'headroom' for cutting taxes and three potential tax cuts have been given some prominence in this discussion: the abolition of inheritance tax, cutting income tax and cutting corporation tax.

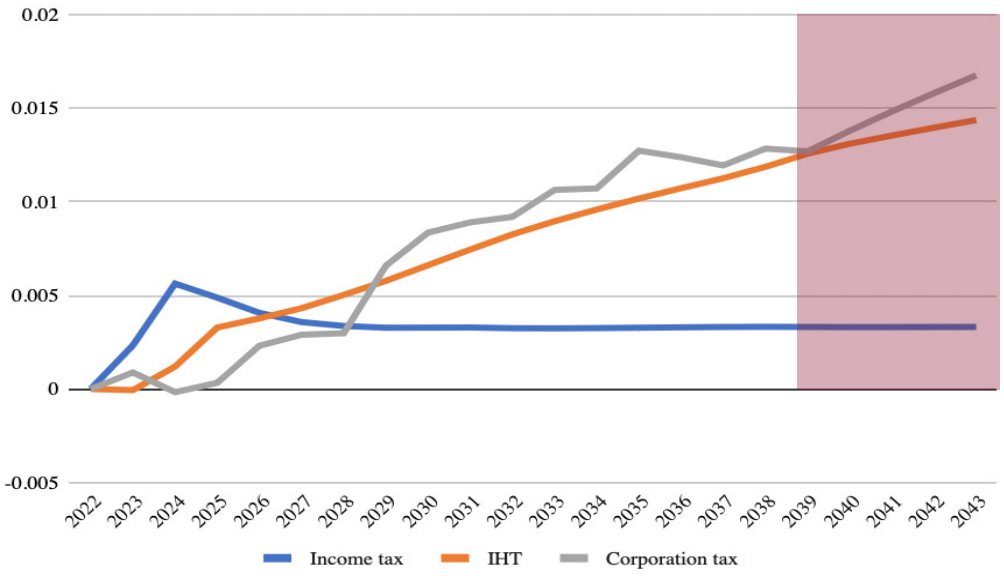
We have used the Growth Commission model to compare spending the same sums of money (ex ante) – both cuts in Inheritance tax and cuts in Corporation tax ultimately have a negative net cost and even some cuts in income tax also cost relatively little eventually when the benefits of stimulated growth are taken into account.

The initial revenue expected to be raised from Inheritance tax in 2024-25 is £7.6 billion. So we have compared this with cutting income tax by an amount, initially reducing revenues by the same amount and cutting Corporation tax by an equivalent amount.

The same ex ante amount could be used to reduce the basic rate of income tax by 1p and the higher rates by 2p; or it could be used to reduce the headline rate of Corporation tax to 22% from 25%.

Figure 19

Comparison of using £7.6 billion ex ante fiscal headroom to cut different taxes - impact on GDP per capita



The results of the comparison are shown in Figure 19. Cutting both Inheritance tax and Corporation tax ultimately boost GDP per capita by much more than cutting income tax and indeed both boost the economy in the long term by enough to generate much more tax revenue than they initially 'cost'. With income tax there is some gain to GDP per capita but it is relatively small.

Inheritance Tax

In our November Growth Budget we suggested that inheritance tax was worth investigating. We have commissioned an extension to our model to calculate the potential impact from abolition.

A study by accountants UHY Hacker Young[56] showed that like for like, the UK and Ireland had the highest such taxes in the world with a sample estate of $3 million being subject to 26% IHT in Ireland, and 25.8% in the UK compared with an EU average of 14% and a global average of 7.7%.

In fact this research has been fruitful and has produced results that might be counterintuitive to some.

The research indicates that abolition of inheritance tax after 20 years would keep 4,300 people in the country who might otherwise have left (this compares with an estimated 1,400 millionaires leaving the UK each year[57]). Obviously these would be disproportionately high net worth individuals. Even the US system, which is very much less onerous, is attracting migrants from the UK.[58]

We also estimate that it would boost employment of older people substantially, leading to a 1.1% boost to employment (though much of this would be part-time).

[56] [Accessed Oct 2023] https://www.uhy.com/uk-imposes-highest-taxes-on-inheritance-of-all-major-economies/#:~:text=For%20example%2C%20China%2C%20India%20and,whether%20through%20investment%-20or%20entrepreneurship.

[57] https://www.bloomberg.com/news/articles/2023-01-20/millionaires-continued-to-flee-post-brexit-britain-in-2022?leadSource=uverify%20wall

[58] Commission members from the US have stressed that the US system is very much less onerous than that in the UK.

And we estimate that investment would also be boosted because of what in effect would be a lower effective cost of capital, resulting from more savings left in the country and a lower total effective tax rate. Indeed, the reduction in the effective cost of capital is the biggest single element boosting economic growth.

Of course the other side of the coin is increased inequality – the direct benefits of abolition would initially go to the better off only. But it is clear that using inheritance tax to reduce inequality is a very expensive way of doing so. Moreover, surprisingly few of the really rich actually pay inheritance tax – they either use trusts to avoid it (and to stop their inheritees spending their inheritance wastefully!) or they go abroad to one of the many places where there is no such tax[59] .

Corporate Taxes

We welcome the full expensing regime introduced in the 2023 Spring Budget[60] and the decision in the November 2023 Budget to make it a permanent feature of the tax system.

As the Irish experience shows, the headline rate of Corporation Tax remains hugely important for driving footloose investment. The stock of foreign direct investment in Ireland is 285% of GDP, four times the EU average[61] .

We continue to propose that the rise in the main rate of corporation tax to 25% from 19% should be reversed next year and that in the long-term the rate is reduced to 15%. We believe that the HMRC assessment of the costs of such a change are exaggerated (see our tax costing and see the references to the impact of corporation tax on the funding of corporates below) since the scale of the behavioural impact on companies in their modelling understates the scale of the impact we expect.

[59] Most such places have better climates also!

[60] [Accessed Oct 2023] https://www.gov.uk/government/publications/full-expensing/spring-budget-2023-full-expensing#:~:text=4.-,How%20does%20full%20expensing%20work%3F,year%20that%20expenditure%20is%20incurred.

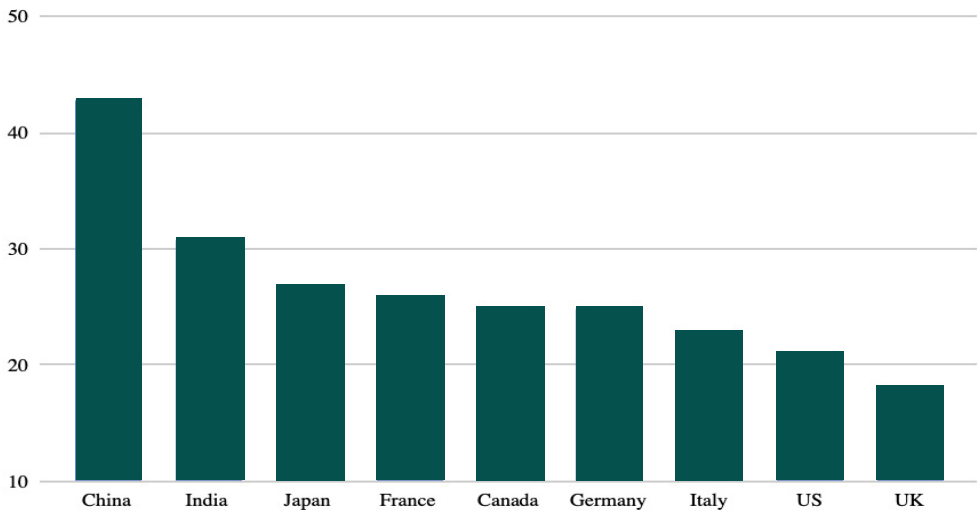
[61] [Accessed Oct 2023] https://www.cso.ie/en/releasesandpublications/ep/p-fdi/foreigndirectinvestmentinireland2021/keyfindings/

The financing of companies in the UK remains a key concern. Against a general background of historically low UK fixed investment as a share of GDP, the London Stock Exchange seems to be increasingly no longer acting as a major element in company financing for UK businesses.

The data for fixed investment as a share of GDP shows the UK well below all other G7 economies and even more so below China and India as is shown in Figure 20. Part of this reflects the planning and other problems that impeded housing and infrastructural investment. But low business investment is also a factor.

Figure 20

World Bank figures for investment as a share of GDP 2022[62]



[62] https://data.worldbank.org/indicator/NE.GDI.TOTL.ZS

The number of UK listed companies on the London Stock Exchange has fallen by 40% since 2008 while in 2023 the exchange raised only $972 million (compared with NASDAQ raising $13 billion in the same year) - the first time since 1995 that the London Stock Exchange failed to raise at least $1 billion. Meanwhile private equity in London raised $51 billion between 2018 and 2023,[63] raising $2.7 billion in 2023 for the months to August[64]. This also compares with the £10.14 billion raised in London in venture capital during 2023.[65]

Often private equity finance is heavily leveraged. This partly reflects the unfavourable tax treatment of public equity where flotation costs are not tax deductible and where tax is charged on the whole value of returns, creating a level of double taxation compared with debt finance where interest payments are tax allowable in the first instance - even if tax is ultimately paid on the interest when it is received by the ultimate beneficiary. The UK House of Lords Library in its report on private equity and leverage has argued:

The regulator of private equity, the FCA, and the Bank of England have warned that excessive debt in private equity can create risks for the financial system.

In a letter to AIFMs in January 2020, the FCA[66] stated that use of "leverage and illiquid investments", which often characterise private equity deals, presents risks to the investors but can also create risks for other market participants and the wider markets. This includes lenders to these funds, such as banks, and investors in them, such as pension funds.

> *"In October 2021, the Bank of England[67] stated that "risks in leveraged loan markets globally continue to build". It said that these risks could affect UK financial stability through the direct impact on banks and the indirect impact of losses spreading through other parts of the global financial system."*

[63] https://www.statista.com/statistics/1313820/largest-private-equity-companies-by-funds-raised-uk/

[64] https://uk.practicallaw.thomsonreuters.com/4-500-5750?transitionType=Default&contextData=(sc.Default)

[65] https://www.maddyness.com/uk/2024/02/02/a-city-that-never-fails-london-raised-all-time-high-levels-of-vc-investment-in-2023/

[66] https://www.fca.org.uk/publication/correspondence/asset-management-portfolio-letter.pdf

[67] https://www.bankofengland.co.uk/financial-policy-summary-and-record/2021/october-2021/financial-stability-in-focus

The most detailed study[68] of UK corporate finance and its interaction with the tax system concluded (at a time when the UK corporation tax rate was 19%) that:

> *"The main findings of our study are as follows. Based on calculating the marginal tax rate from tax returns matched with financial statement variables, we estimate that in the long run a one percentage point rise in the corporation tax rate would increase the leverage ratio of private companies by around 1 percentage point (our central estimates range from 0.76 to 1.40, depending on the instruments used). This result suggests that our sample firms are strongly responsive to changes in tax incentives for borrowing."*

It is this conclusion that underpins our scepticism about the scale of the revenues likely to be raised by the increase in corporation tax from 19% to 25%.

The EU has gone so far as to propose a Debt Equity Bias Reduction Allowance,[69] creating a tax allowance at the individual investor level equal to the increase in the value of equity held. Professor Michael Devereux, a leading UK expert on corporate taxation, has proposed an Allowance for Corporate Equity[70] in evidence to the House of Commons.

The EU has carried out some hypothetical calculations on the extent of the debt equity bias in the UK system and its implications for investment, which shows convincingly how the tax system is heavily biased against both retained earnings and the issue of new equity in favour of the issue of debt.[71]

We believe it is important to reduce and ultimately end the debt equity bias.

[68] Corporate tax incentives and capital structure: New evidence from UK firm-level tax returns Michael P. Devereux a, Giorgia Maffini a b, Jing Xing https://www.sciencedirect.com/science/article/abs/pii/S0378426617302923

[69] https://taxation-customs.ec.europa.eu/taxation-1/debt-equity-bias_en

[70] https://publications.parliament.uk/pa/jt201314/jtselect/jtpcbs/27/27ix_we_h14.htm

[71] The full results are in Sectio B1 of Project for the EU Commission TAXUD/2020/DE/308 FINAL REPORT 2020 EFFECTIVE TAX LEVELS USING THE DEVEREUX/GRIFFITH METHODOLOGY https://taxation-customs.ec.europa.eu/system/files/2021-02/final_report_2020_effective_tax_levels_revised_en.pdf. This project lasted so long that the results, issued in 2020, related to the 2005 UK tax system. However the recent rise in the Corporation Tax rate back to 25% has made the system more similar to that in 2005 than it was when the rate was 19%.

In the first instance we believe that the best way to achieve this is to reduce the corporate tax rate as proposed above and to introduce a tax allowance for the costs of flotation when a company is floated publicly. But we stress that the worst possible outcome would be to remove the tax deductibility of interest – this should be avoided at all costs.

Income Tax

We have three priorities for Income Tax. The first is to redress the costs of the frozen tax allowances and to unfreeze these allowances. The second is to remove the economically damaging 60% -70% rate of tax on those earning more than £100,000 as their tax allowances are phased out. Our third priority is to end the high marginal rates of combined tax and benefit withdrawal in middle income ranges for families with children.

We propose that the freezing of the tax allowances ends in 2024-25.

We propose that the high marginal rate of tax as the allowances are phased out is itself phased out before 2030. There is little data available on the cost of this but we have made a rough estimate of an initial annual cost of 0.2% of GDP (currently around £5 billion), though over time this would easily be more than offset by the additional growth generated. When the phasing out was introduced in 2008 and 2009 it was estimated by the Treasury to be likely to raise an additional £1.5 billion in tax although that was at a time when bankers' bonuses were especially high.[72]

The phasing out of the high marginal rates of combined tax and benefit withdrawal and also the withdrawal of the child care allowance at an income of £100,000 are likely to have costs[73] and we are assuming 0.3% of GDP. But we think that ultimately additional growth will pay for these costs.

[72] [Accessed Oct 2023] https://assets.publishing.service.gov.uk/media/5a758b-fe40f0b6397f35f419/0407.pdf (Footnote to Table 1.2)

[73] Dan Neidel of Tax Policy Associates estimates the cost of the former at £5 billion. https://taxpolicy.org.uk/2022/10/04/marginal/

Indirect Tax

Our only current proposal on indirect tax is one that, although it will apparently reduce tax, will in fact raise revenues for the UK, if possibly at the expense of revenues in other countries.

This is the abolition of the so-called 'tourist tax', the requirement for tourists to pay VAT on their purchases. The tax was imposed in 2021, allegedly in response to Brexit. In a court case related to it, it became clear from the evidence provided by HMRC that the government's case for imposing the tax was based on a series of misunderstandings and miscalculations.[74]

A detailed study of the subject concludes that UK GDP is reduced by £10.7 billion and UK tax receipts by £2.3 billion by the imposition of this tax[75] in 2023. This study has now been updated to estimate that the cost to GDP will be £11.1 billion and the net boost to tax receipts £2.5 billion[76] . In the light of this new information the Chancellor has asked the OBR to re-examine the case for the tax.

Stamp Duties

It is generally presumed that as taxes on transactions, stamp duties damage the economy through encouraging misallocated resources and through inhibiting economic flexibility.

We have not fully analysed the impact for this year and therefore have not included a recommendation that they be changed or abolished. But this could become a priority for a future budget.

[74] [Accessed Oct 2023] https://www.judiciary.uk/wp-content/uploads/2022/07/Heathrow-Airport-Limited-v-Her-Majestys-Treasury-summary.pdf

[75] [Accessed Oct 2023] https://cebr.com/reports/removal-of-tax-free-shopping-costing-10-7bn-in-lost-gdp-and-deterring-two-million-tourists-a-year-report-concludes/

[75] https://uk.finance.yahoo.com/news/tourist-tax-puts-off-two-000100710.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAE_O-0vCiqC-Gg_rGFkwQaydry-oU2-QrsXJwtmUNiyBB5Z339gRwUgevNUfP-brnX8qq87sX7PcZFAXSn72nRT8yMvMu8X-zZW4xItwmmi-NmARqCU5gq14QDFxiSY-eojEwn6LsdYUYb5JwSLrCL9fymjFeI2u3Zcn-h5APp0JGNvhV

Outlook after the Growth Commission Budget

We have simulated the results of the policies set out above. The analysis shows an impact in the initial years that builds up significantly in the years as the policies come to fruition.

It is not unexpected that the policies take time to have their effect. We estimate that GDP per capita in 2024-25 will only be 0.4% higher than the forecast on unchanged policies, barely enough to stave off recession. There is a further impact predicted for 2025-26 but the bigger gains start to emerge in 2027-28 and 2028-29 by which years GDP per capita is forecast to be 9.1% and 12.5% respectively higher than on unchanged policies.

But the significant gains take time to come through – we estimate that by 2044-45, in 20 years' time, GDP per capita will be 28.0% higher than on unchanged policies – the contribution of each policy to the gain in GDP is set out in Table 9.

Table 9 Impact of Growth Budget on GDP per capita by year

Growth Commission policies impact on GDP per capita (per cent)

	2024-25	2025-26	2026-27	2027-28	2028-29	2044-45
Planning and housing	0.1	0.4	0.7	0.8	1.0	6.4
Energy and smart green	0.0	0.1	0.2	0.6	0.8	2.2
Labour market	0.2	0.4	0.8	1.0	1.1	1.9
Minimum wage	0.0	0.1	0.2	0.3	0.4	0.8
Infrastructure	0.0	0.2	0.4	0.6	0.8	1.4
Public sector productivity	0.0	0.6	1.0	1.7	2.5	4.4
Welfare and pensions	0.0	0.0	0.0	0.6	0.9	1.6
Abolition of inheritance tax	0.0	0.0	0.1	0.3	0.4	1.4
Lower corporation tax	0.0	0.1	0.4	0.9	1.2	2.6
Income tax	0.0	0.0	0.2	0.6	1.3	1.3
Tourism tax	0.0	0.2	0.4	0.4	0.4	0.4
CBAM and other trade openness	0.0	0.3	0.6	0.9	1.2	1.5
Reduce migration to 150k	0.1	0.2	0.3	0.4	0.5	2.1
Total	0.4	2.6	5.3	9.1	12.5	28.0

The total forecast GDP per capita growth after implementation of the Growth Budget is an additional 1.2% per annum, leading to GDP per capita growth in total over the period to the mid-2040s at an annual rate of 2.4%.

Impact on GDP Per Capita Per Household

We have looked carefully at the effects of our policy proposals on the outlook for GDP per capita, compared with US GDP per capita at 2023 prices.

Figure 21 and Figure 22 show the forecast for GDP per capita. GDP per capita is currently 65% higher in the US than in the UK. On unchanged policies we forecast that the gap will grow to 74%. But if the Growth Commission's example policies are pursued, the gap will instead fall to 36%, i.e. roughly halved compared with what otherwise would have happened.

The analysis shows that UK GDP per capita is currently £39,474 in 2024 and on unchanged policies at 2023 prices is forecast to rise to £51,411 by 2044. With Growth Commission policies it is forecast to rise to £65,982, a gain of £14,570 per person.

Figure 21

GDP per capita £ per annum

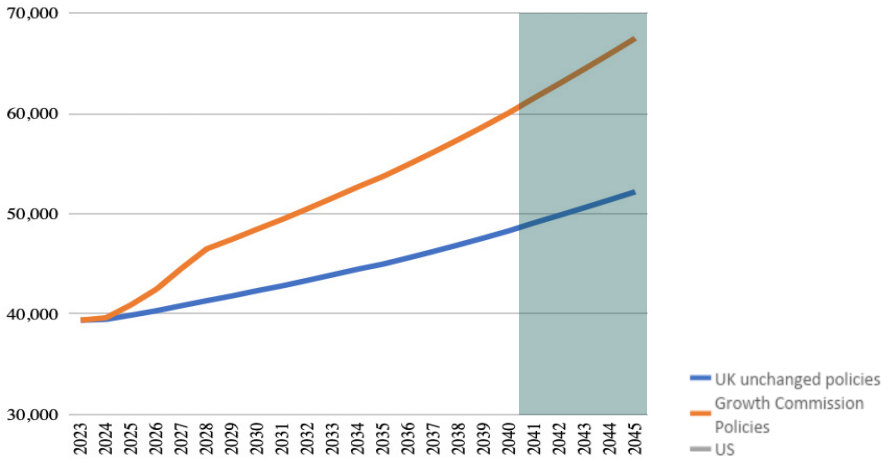
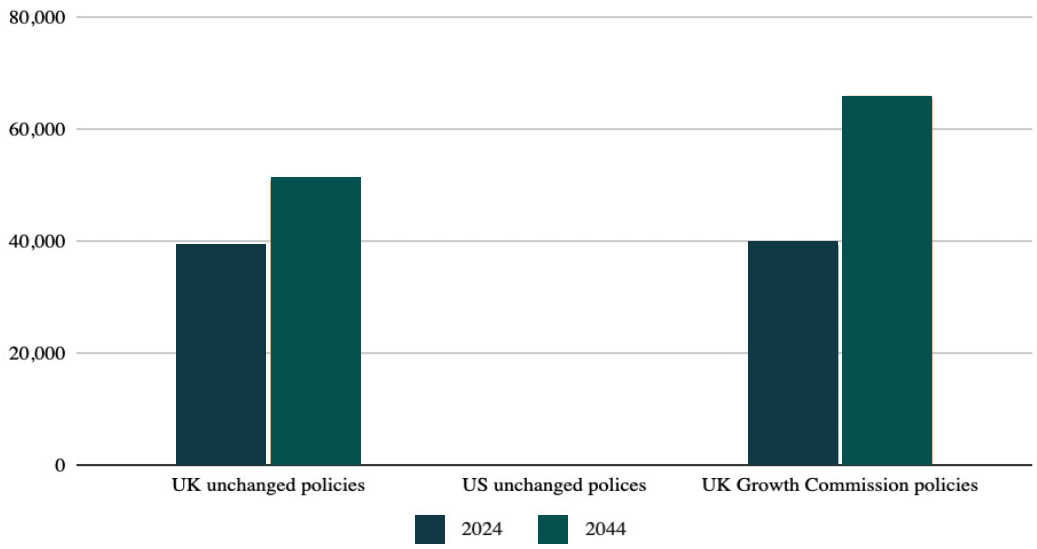


Figure 22

GDP per capita £ per annum



We haven't made the comparison with the US for GDP per household because the differential rate of change of household size complicates the comparison.

But the forecasts show that UK GDP per household is currently £92,764 in 2024 and on unchanged policies at 2023 prices is forecast to rise to £115,161 by 2044. With Growth Commission policies it is forecast to rise to a gain of £32,637 per household.

Fiscal Impact on Changed Policies

Table 10 shows the detailed calculated impact of the Growth Commission proposals on GDP per capita; Table 11 shows the potential cost before behavioural change of the proposals to net tax revenue as a percentage of GDP.

Table 11 Comparison of OBR fiscal impact with fiscal impact of Growth Commission policies

Growth Commission policies impact tax cost as % of GDP

	2024-25	2025-26	2026-27	2027-28	2028-29	2044-45
Planning and housing	1.0	8.6	26.1	41.4	56.5	980.2
Energy and smart green	0.0	2.1	7.4	31.1	45.2	337.0
Labour market	2.1	8.6	29.8	51.8	62.1	291.0
Minimum wage	0.0	2.1	7.4	15.5	22.6	122.5
Infrastructure	0.0	4.3	14.9	31.1	45.2	214.4
Public sector productivity	0.0	12.9	37.2	88.0	141.2	673.9
Welfare and pensions	0.0	0.0	0.0	31.1	50.8	245.1
Abolition of inheritance tax	0.0	0.0	3.7	15.5	22.6	214.4
Lower corporation tax	0.0	2.1	14.9	46.6	67.8	398.2
Income tax reforms	0.0	0.0	7.4	31.1	73.4	245.1
Tourism tax	0.0	4.3	14.9	20.7	22.6	61.3
CBAM and other trade openness	0.0	6.4	22.3	46.6	67.8	229.7
Reduce migration to 150k	1.1	4.5	11.7	21.6	29.4	327.8
Total	4.2	56.0	197.9	471.9	707.3	4340.6

Table 11 Comparison of OBR fiscal impact with fiscal impact of Growth Commission policies

Growth Commission policies impact tax cost as % of GDP

	2024-25	2025-26	2026-27	2027-28	2028-29	2044-45
Planning and housing	0.0	0.3	0.5	1.0	1.0	1.0
Energy and smart green	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Labour market	0.0	0.0	0.0	0.0	0.0	0.0
Minimum wage	0.0	0.0	0.0	0.0	0.0	0.0
Infrastructure	0.0	0.5	1.0	1.5	1.5	1.5
Public sector productivity	0.0	-0.6	-1.0	-1.7	-2.0	-4.4
Welfare and pensions	-0.5	-0.5	-0.6	0.0	0.5	0..5
Abolition of inheritance tax	0.3	0.3	0.3	0.3	0.3	0.3
Lower corporation tax	1.0	1.0	1.0	1.0	1.9	1.9
Income tax reforms	0.3	0.9	1.5	2.2	2.5	2.8
Tourism tax	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
CBAM and other trade openness	0.0	0.0	0.0	0.2	0.4	1.0
Reduce migration to 150k	0.3	0.3	0.5	0.5	0.7	2.7
Higher spending on defence and service	0.2	0.4	0.6	0.8	1.0	2.0
Total	1.4	2.4	3.6	5.6	7.6	9.1

Table 12

Growth Commission Assumptions	Per cent of GDP	
	Forecast	
	2028-29	2044-45
Receipts and expenditure		
Public sector current receipts (a)	38.6	35.0
Total managed expenditure (b)	39.4	33.4
Public sector net borrowing (b-a)	0.8	-1.7
Public sector net debt	89.6	50.5

Table 12 shows how the public finances add up after taking account of the Growth Commission proposals (the 'economic arithmetic'). It shows borrowing turning negative to a surplus and debt falling sharply.

What is clear is that the Growth Commission policies make substantial progress in reducing both tax and spending as a share of GDP and also turn public borrowing negative. The reductions in public spending result from lower spending but also from higher GDP.

The move towards running a budget surplus brings public debt as a share of GDP down to 50.5% of GDP, well below 60% of GDP which is often considered as the level consistent with sustainability.[77]

[77] Eg in the EU's Growth and Stability Pact

Appendix 1

The Models Used

The costings for this report have used two Growth Commission proprietary models plus a considerable amount of off-model work. The basis for the calculations for each policy is set out below; this section describes these two proprietary models, the micro model and the macro model.

Micro or ACMD Model

The model which we have developed is based on the notion that the three pillars of economic development are property rights protection, domestic competition and international competition[78] . Broadly, anti-competitive government policy affects the way the market functions through one of these three pillars. We call it the micro model but some also call it the Anti Competitive Market Distortions model (ACMD model).

Property Rights

The foundation of a productive economy is property rights protection. If property rights are left unprotected, the incentive to invest, compete and innovate is lost. If the returns from effort cannot be captured, can be taken away or cannot be regained if wrongly taken away, what incentive is there to exert effort? Furubotn and Pejovich[79] describe the nature of property rights in this way:

[78] As proposed and argued in Singham, Shanker A General Theory of Trade and Competition: Trade Liberalisation and Competitive Markets (Cameron 2007), and Shanker A. Singham and Alden F. Abbott Trade, Competition and Domestic Regulatory Policy (Routledge, 2023); International competition is way of describing the openness of a country's trade regime.

[79] Eirik G. Furubotn, and Pejovich, Svetozar Property Rights and Economic Theory: A Survey of the Recent Literature (1972) 10(4) Journal of Economic Literature 1137,1137-1162.

"... property rights do not refer to relations between men and things but, rather, to the sanctioned behavioural relations among men that arise from the existence of things and pertain to their use ... The prevailing system of property rights in the community, then, can be described as the set of economic and social relations defining the position of each individual with respect to the utilisation of scarce resources" (p. 1139, italics are the authors'). The authors add in a footnote that, "Roman Law, Common Law, Marx and Engels, and current legal and economic studies basically agree on this definition of property rights." In other words, the very nature of an economic transaction is defined by the right to property and this definition is not disputed.

Property rights allow four things to occur: (1) investment to create the property (as in the case of intellectual property or IP and machinery); (2) investment to make the property more productive (as in the case of land, machinery, and IP); (3) exploitation to get the maximum productivity out of it (as in the case of land, machinery, IP, etc.); (4) transfer of property to another who might be able to do a better job of the first three instead of the current owner of the property (as in the case of land, machinery, and IP). All these lead to increased productivity, higher incomes and thus wealth and prosperity. So, a lack of property rights protection effectively undermines the ability of economic agents to operate effectively. It also undermines the process of competition, because property rights are what firms compete with. In developing countries in particular, establishing and enforcing property rights plays a significant role in creating the preconditions for growth[8081]. Therefore, all other factors influencing economic outcomes depend on the level and quality of property rights protection. We account for the fact that the effect of domestic competition and international competition on other factors depends on the level of property rights in our model and will discuss how we capture this in the next section.

The Property Rights Protection indicator is shown in Table 10.

[80] Besley, Timothy. Property Rights and Investment Incentives: Theory and Evidence from Ghana. (1995) The Journal of Political Economy103(5) 903,903-937

[81] A lack of property rights protection creates what De Soto calls "dead capital" – the poor cannot leverage the assets they do accumulate, which prevents entrepreneurialism. See: Hernando De Soto The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else. (New York: Basic, 2000).

Table 13

Property right protection indicator

Sub component	Source
1. Efficiency of the judicial system	
Efficiency of the legal framework in challenging regulations	Global Competitiveness Index
Efficiency of the legal framework in settling disputes	Global Competitiveness Index
2. Intellectual property protection	Global Competitiveness Index
3. Integrity of the legal system	
Strength of minority investor protection	WB Doing Business
Legal rights index (financial)	WB Doing Business
Judicial independence	Global Competitiveness Index
4. Enforcing contracts	
Enforcing contracts (cost)	WB Doing Business
Registering property (cost)	WB Doing Business
Enforcing contracts (time)	WB Doing Business
Registering property (time)	WB Doing Business
5. Resolving insolvency	
Outcome (0 as piecemeal sale and 1 as going concern)	WB Doing Business
Time (years)	WB Doing Business
Cost (% of estate)	WB Doing Business
Recovery rate (cents on dollar)	WB Doing Business

Intellectual property rights are themselves a type of property rights and are a crucial aspect of economic development[82]. Including this measure as a part of a property rights protection indicator was obvious and necessary. The other subcategories are each different ways in which policy can ensure that the effort of agents cannot be wrongfully expropriated, that when a person's rights are violated the process for righting that wrong is not prohibitively expensive[83], and that the legal system itself has integrity.

Domestic Competition

Domestic competition plays a significant role in the efficiency of both domestic and foreign firms. Competition among firms encourages innovation and upgrading of production processes, as well as positive externalities in local markets[84]. Each of these features of competition has a positive impact on welfare, which justifies its inclusion as part of this index.

Table 14

Domestic competition components

Sub index	Source
Labour freedom score	Index of Economic Freedom
Minimum wage	
Associational right	
Paid annual leave	
Notice period for redundancy dismissal	
Severance pay for redundancy dismissal	
Labour productivity	
Labour force participation rate	
Restrictions on overtime work	
Redundancy dismissal permitted by law	

[82] For a detailed treatment of the importance of intellectual property rights, see chapter 9 of: Singham, Shanker. A General Theory of Trade and Competition: Trade Liberalisation and Competitive Markets. (Kent: Cameron 2007).

[83] Either financially or through time commitments

[84] Michal E. Porter, The Competitive Advantage of Nations (New York: Free Press, 1990). As cited in Sakakibara, Mariko and Porter, Michael E. 'Competing at Home to Win Abroad: Evidence from Japanese Industry' (2001) 83(2)The Review of Economics and Statistics 310,310-322. Positive externalities include, "... supplier availability, easier access to technology and market information, and specialised human resource development" (Sakakibara, et al. p. 310).

Business freedom score Access to electricity Business environment risk Regulatory quality Women's economic inclusion	Index of Economic Freedom
Financial freedom score The extent of government regulation of financial services the degree of station intervention in banks and other financial firms through direct and indirect ownership Government influence on the allocation of credit The extend of financial and capital market development Openness to foreign competition	Index of Economic Freedom
Electricity cost	WB Doing Business
Electricity time	WB Doing Business
Quality of roads	Global Competitiveness Index
Quality of ports	Logistics Performance Index
Mobile telephone subscription	Global Competitiveness Index
Individuals using internet %	Global Competitiveness Index
Government Integrity Score Perceptions of corruption Bribery risk Control of corruption	Index of Economic Freedom

Typically, the term “competition policy” refers to regulations – and the enforcement of regulations – concerning restraint on competition created by private parties. Our Domestic Competition indicator is, instead, meant to capture the extent to which government policy itself restricts competitive behaviour. Timothy Muris[85] highlights the importance of understanding and correcting restrictive government actions – not just private restrictions. He compares these two sources of competitive restrictions to the forks in a stream and states: “Protecting competition by focusing solely on private restraints is like trying to stop the water flow ... by blocking only one channel.” Muris goes on to say that creating a system which prevents anti-competitive behaviour by firms but allows a government to dictate the same anti-competitive outcome that would have resulted from private action has not eliminated the problem but rather “it has simply dictated the form that the problem will take.” Domestic competition here refers to the domestic policies affecting the way in which firms make decisions and interact with one another. Any policy which limits profit-maximising firms’ ability to make their own decisions will reduce the score for Domestic Competition for a country.[86] If a policy reduces the ability of some subset of firms to make their own decisions while not restricting others in the same way, then the Domestic Policy score will be reduced. However, this does not mean that a country with no regulations controlling the decisions of firms will receive the highest score. The goal of this index and the scores it generates is to allow comparisons between countries regarding the degree to which policy is welfare-maximising. If welfare is to be maximised, then some government regulation may be appropriate in many contexts. For example, if a market can be characterised as a natural monopoly, appropriately tailored government regulation may be crucial for welfare maximisation[87] . If there are true market failures that are not being handled adequately through purely private action (severe adverse health effects from pollution, a shortage of funds for post-secondary education, harmfully discriminatory practices, etc.), then government regulation may be necessary.[88]

[85] Timothy J. Muris, Principles for a Successful Competition Agency (2005) 72(1) University of Chicago Law Review, 165, 165-187.

[86] Similarly, the Washington Consensus includes privatization as one of the 10 key areas of development because of the belief that that ”private industry is managed more effciently than state enterprises, because of the more direct incentives faced by a manager who either has a direct personal stake in the profits of an enterprise or else is accountable to those who do. At the very least, the threat of bankruptcy places a floor under the ineffciency of private enterprises, whereas many state enterprises seem to have unlimited access to subsidies.” This theory is the backbone of our Domestic Competition indicator. However, regulation of private markets is not discussed in the Washington Consensus. We correct this oversight by emphasising the importance of policies which allow firms to make their own decisions. Originally conceived in: Williamson, John. What Washington Means by Policy Reform. In John Williamson (ed) Latin American Adjustment: How Much Has Happened? (Institute for International Economics, 1990. Also available: http://iie.com/publications/papers/paper.cfm?ResearchID=486 See also: http://www.who.int/trade/glossary/story094 Tejvan, Pettinger, Washington consensus – definition and criticism (Economics Help April 25, 2017) http://www.economicshelp.org/blog/7387/economics/washington-consensus-definition-and-criticism/
Stanley Fischer ‘The Washington Consensus’ in C F Bergsten (ed) Global Economics in Extraordinary Times: Essays in Honor of John Williamson (Peterson Institute for International Economics, 2012): 11-24. www.piie.com/publications/chapters_preview/6628/02iie6628.pdf

[87] When changing market characteristics, such as new technologies, eliminate natural monopoly conditions, however, maintaining government regulation may become counterproductive and welfare-inimical, and such regulation should be lifted.

[88] Before the government acts, care should be taken to ensure that the private sector cannot adequately rectify the market failure at issue, and that the costs associated with government intervention are not likely to outweigh the benefits that flow from eliminating (or reducing) the market failure.

These antitrust, or industrial organisation types of regulations are part of the Domestic Competition score. No judgement is made as far as the exact specification of the regulation. Instead, the effectiveness of antitrust policy and the cost of adhering to different policies are the measures used.

The Domestic Competition score is higher when firms are able to make their own decisions because we are trying to evaluate how well domestic policies promote competitive behaviour. It is constructed as follows. Competitive behaviour refers to the behaviour firms exhibit in a particular market which will maximise welfare within the market. Therefore, the Domestic Competition score is higher when policies respond to market failures and antitrust violations effciently but otherwise do not interfere with or dictate firm behaviour. This is because firms seeking to maximise profit in a competitive situation - no market failures, and no antitrust violations - are driven by market forces - the demand from customers, the decisions of competitors, the costs of inputs - to produce a superior product, as efficiently and economically as possible, and sell it at a competitive price to gain market share. This is Adam Smith's invisible hand at work, sternly incentivising producers to further the public good, not because the producers are benevolent, but because it pays to do so.

That is, once any market failures are corrected for, firms will behave in a way which maximises welfare. Of course, in practice it is often very diffcult or impossible to fully correct a market failure. However, some countries will do a better job than others in choosing and implementing policies that effectively respond to market failures. The closer a country is to actually eliminating a market failure, the closer it will be to moving a market toward its welfare-maximising equilibrium.[89]

The Domestic Competition indicator is defined by infrastructure[90] and the policies concerning how firms make decisions. Infrastructure and the effciency with which it is built have serious implications for the competitiveness of a country. Reliable, well-maintained infrastructure is a crucial component of efficient markets.

[89] The welfare-maximizing number and size of firms will depend on the market (type of good, substitutes, demand, etc.)

[90] The ideal infrastructure measures would be those that reflect the policy for awarding contracts for infrastructure projects (specifically, for building, managing, or maintaining infrastructure). However, the primary data available is concerned with outcomes, with only a couple of exceptions in financial infrastructure.

Here, infrastructure reflects each type of infrastructure in an economy. Labour regulations are defined by how free firms are to hire and fire employees, as well as how firms are then allowed to utilise those workers. Restrictions on the hiring and firing process or deployment of labour decisions will reduce the score for Domestic Competition. The less flexible policy makes the labour force, the higher the cost of production will be because firms will have to work around or suffer the restriction of each policy. Regulatory promulgation process refers to how laws are created. If the government is allowed to make decisions based on favouritism and the process is not transparent, ACMDs can be created at will. There will be no need to disguise them as market failures, or if they are disguised, they will be very diffcult to recognize. Industrial organisation policies refer to the regulations to which firms must adhere to in order to participate in a market and how antitrust deals with anti competitive behaviour when it arises. All of these areas impact a firm's ability to make their own profit-maximising decisions.

International Competition

International Competition refers to the degree to which a country allows foreign firms to access its domestic market and the degree to which it allows domestic firms to access foreign markets. Any restriction on the free flow of trade which is not the correction to a market failure will reduce the score for International Competition. Greater access to a wider variety of goods benefits consumers and greater access to less expensive or higher quality inputs benefits firms. Also, exposing firms to potentially more effcient foreign firms promotes innovation. All of these forces combine to generate gains in welfare[91] . International Competition refers to how open a country is to interacting with foreign markets (a measure of the openness of its trade policy). The policies which reduce the score here are those that make it more costly or burdensome to transact internationally. The indicator is constructed as follows.

[91] For a description of the theory see: Claustre Bajona, Mark J. Gibson, Timothy J. Kehoe, and Kim J. Ruhl 'Trade Liberalization, Growth, and Productivity' (2008) Prepared for the conference "New Directions in International Trade Theory" at the University of Nottingham also available < http://www.econ.umn.edu/~tkehoe/papers/BajonaGibsonKehoeRuhl.pdf>
Note: These authors also highlight the fact that trade openness does not always lead to increased GDP and that the theory does not predict an increase in GDP from openness. The theory does predict greater welfare from openness, though. We will use GDP per capita as our proxy for welfare because we do not have a direct measure of welfare. There are many sources which do find a positive relationship between openness and GDP. A few examples include (as cited in Bajona et al. (2010)): Jeffery A. Frankel, and David H.. Romer (1999), 'Does Trade Cause Growth?' (1999) 89(3) American Economic Review 379,379-399; Robert E.Hall, and Charles I. Jones 'Why do some countries produce so much more output per worker than others?' (1999) 114(1) Quarterly Journal of Economics 83 83-116. Francisco Alcalá and Antonio Ciccone 'Trade and Productivity' (2004) 119 Quarterly Journal of Economics, 613-46.

Table 15

International Competition components

Sub component	Source
LPI timeliness indicator	Logistics Performance Index
LPI international shipment indicator	Logistics Performance Index
LPI customes indicator	Logistics Performance Index
Trade Freedom score	Index of Economic Freedom
Freeom of foreigners to visit	Human Freedom Index
Freedom to own foreign currency	Human Freedom Index
Capital controls	Human Freedom Index

- The LPI Timeliness indicator measures the frequency with which shipments reach consignees within schedules or expected delivery times from hardly ever to nearly always.
- The International Shipment indicator measures the ease of arranging competitively priced shipments from very difficult to very easy.
- The LPI Customes indicator measures the efficiency of customes and border management clearance from very low to very high.
- The Trade freedom score is a composite measure of the extent of tariff and nontariff barriers that affect imports and exports of goods and services. The trade freedom score is based on two inputs, the tradeweighted average tariff rate and a qualitative evaluation of nontariff barriers (NTBs).

Tariffs and procedural burden directly affect the flow of goods. Financial restrictions affect the flow of capital. The freedom of foreigners to visit is a measure reflecting the general openness of the economy to outsiders visiting. A policy which restricts visitation by foreigners would make it more diffcult for foreign firms to have a presence in an economy. If any of these categories is restrictive, it will be more diffcult for trade to occur. The Washington Consensus[92] also noted the importance of eliminating distortionary trade policies applied differently in different areas[93] . Import liberalisation is seen as particularly important because it eliminates the export disadvantage created by restricted access to less expensive imported intermediate goods. This type of ACMD is exactly what we are trying to capture with our International Competition index.

Combined Effects

An important point to be made is that if one of these three areas is improved while the other two are left in a poor condition the impact on productivity will be reduced or reversed. For example, if Domestic Competition is improved by making it faster and less costly for domestic firms to start a business but property rights are left unprotected and international competition is prevented, the impact on productivity will likely be zero because firms will still be uncertain about entering the market (because their property can be expropriated, for example) and will not need to compete as fiercely as they would in the face of foreign competition.

[92] Williamson, John What Washington Means by Policy Reform, in Jeffry A Frieden (ed) Latin American Adjustment: How Much Has Happened? (Routledge New York, 1990) also available https://www.piie.com/commentary/speeches-papers/what-washington-means-policy-reform?ResearchID=486

[93] Though, again, no emphasis was given to the competitive environment within a country except for the stress on privatization.

Each of the three categories has an impact on how an improvement in the other categories will be realised in terms of productivity. As stated previously, without property rights protection agents cannot act in their own economic interests. This means that without property rights protection improvements in the other two categories will have no effect on the determinants of productivity. Domestic competition determines the structure of a domestic market which determines the equilibrium of each domestic market. If firms are not allowed to decide how they will behave then imported foreign goods will enter an ineffcient market and face ineffcient constraints on their position in that market. It is possible that distorted domestic competition may help or hurt foreign firms. Similarly, international competition policies can prevent foreign firms from entering the domestic market, or may prevent domestic firms from reaching foreign markets. In either case, the total effect in the long-run will be a reduction of welfare[94] . Also, improving each of these three areas simultaneously will have a combined effect. If a country can correct the ACMDs in every area it can move toward its optimal welfare level. Leaving ACMDs uncorrected in any area will negatively affect the benefits from correcting other ACMDs.

The ACMD model considers effects across each of these pillars or indices separately, but it will certainly be part of the ongoing work of the model to consider how feedback loops and combined effects can be properly measured.

[94] See SRB (2014)

Initial Projections

Initial projections from the Singham Rangan Bradley model suggest that a reduction in ACMDs does lead to a significant increase in GDP per capita in line with the projections from the agency based model and from other sources, such as OECD and other figures on the impact of anti-competitive regulation on growth.

Our latest build on the SRB Model will look at the impact on GDP per capita of distortions in each of the three pillars distinctly. This enables us to measure the impact of particular policies on scores within each of the pillars and thus on GDP per capita.

$$\ln(GDP\ per\ capita)_{it} = \beta_0 + \beta_1 Domestic\ Competition_{it} + \boldsymbol{Xit}'\boldsymbol{\gamma} + \upsilon t + \lambda i + \epsilon it \quad (1)$$

$$\ln(GDP\ per\ capita)_{it} = \beta_0 + \beta_1 Property\ Rights_{it} + \boldsymbol{Xit}'\boldsymbol{\gamma} + \upsilon t + \lambda i + \epsilon it \quad (2)$$

$$\ln(GDP\ per\ capita)_{it} = \beta_0 + \beta_1 International\ Competition_{it} + \boldsymbol{Xit}'\boldsymbol{\gamma} + \upsilon t + \lambda i + \epsilon it \quad (3)$$

We construct a panel data model of GDP as a function of each competition index, several observed control variables and an unobserved time invariant country specific effect and a country invariant time period specific effect.

There are likely factors that impact a country's income that we have not included in our model. If they are systematically related to our index of interest this will bias our estimates. We minimise this risk by introducing **time and country dummy variables.**

These capture the time invariant country effects, λ_i, and country invariant time effects, ν_t, specified in equations (1-3). An example of a time-invariant country effect might be omitted institutional factors, geographical factors or cultural factors that impact the level of income. An example of a country-invariant time effect is a global trend such as oil prices. It is plausible that our indices are correlated with these factors. If this is the case, then our coefficient of interest will be biased by their omission. A country dummy variable eliminates this source of bias as we only attribute variance in income to varying factors inside a country that cannot be explained by global trends.

Findings

- A unite increase in domestic competition index is on average associated with increase in GDP per capita of 12.1% or 13.3%[95]
- A unit increase in the property rights index is on average associated with increase in GDP per capita of around 6.5% or 11.1%[96]
- A unite increase in the international competition index is on average associated with increase in GDP per capita of around 7.6%[97]

[95] The lower estimate is the result from a model which controls for both country and time fixed effects whereas the higher estimate is given by the model with country fixed effects.

[96] ibid

[97] Given by the model with country-fixed effects

Macro Model

The Growth Commission model reflects its understanding of how economies work in practice. It is heavily influenced by the models developed by the London Business School in the 1980s, building up aggregate demand from its individual components and with supply-side effects working through real variables, such as the exchange rate and wages[98].

There is a role for monetary policy, which influences the model through the exchange rate and impacts on asset prices. Labour market variables, such as wages and employment decisions, are endogenously determined within the model. The modelling approach has of course been refined to capture more contemporary developments within the UK economy, including the lull in productivity growth since the global financial crisis, the impact of recent shocks such as the Covid-19 pandemic, and changes in the relative importance of sectors, notably the growth of information and technology.

The modelling is also informed by an understanding of the structure of the UK economy relative to other countries. The UK is a fairly advanced and heavily service-based economy. It has a large public sector with relatively high taxes, though some neighbouring economies have much higher taxes. It is relatively heavily regulated. These characteristics all impact the UK economy's performance relative to others, which in turn affects a range of variables from migration to business performance.

The UK is an open economy. As a result, external circumstances affect its performance. Modelling the external sector and international capital flows is therefore important to understanding how the effects of policies develop.

The model also accounts for structural features that are widely accepted to be present in all economies, not least that of the UK.

[98] Budd et al (1984) - The London Business School econometric model of the UK

For instance, it captures the fact that output has both trend and cyclical components, with the trend being driven by factor endowments, capital supply, the quantity and quality of labour supply, and entrepreneurship. The efficiency with which these factors can be translated into output is very much affected by regulatory conditions, in addition to other policy interventions such as educational standards. Meanwhile, the cyclical component of output generally reflects inflation and policy, both monetary and fiscal. Recently, external developments and shocks, such as the Covid-19 pandemic and the energy crisis, have dominated over the cyclical and trend components of output.

An understanding of the labour market lies at the heart of a good economic model, especially in a modern service economy such as the UK. This is particularly the case when modelling the impact of tax and regulation changes, given the myriad ways in which these policies affect the decisions of agents. On the individual side, high taxes discourage paid work or drive it into the underground economy, while businesses may be stifled by high degrees of taxation, reducing innovation, capital formation and long-run productivity growth.

The model described here is aimed at being able to demonstrate and quantify how these tax and regulatory changes work through the economy, showing timing and knock-on effects. It will be capable of incorporating input from the Commission's other models but will also be capable of being a self-standing model of the impact of tax changes.

Constructing the Growth Commission Macro Model

The model was based on a series of equations to model the structure of the UK economy, to be known as the Growth Commission Macro Model. These equations capture the interdependencies between broad economic variables, as well as the impacts of exogenous shocks, such as tax policy changes. Broad economic variables will here refer to consumption and investment. This exercise is based on established macroeconomic theory, though the model construction also involved a review of recent microeconomic studies to provide agent-level foundations for the model, including stated and revealed preference studies, assessing how individuals respond and expect to respond to changes in the economic environment.

Assessing the Impact of Tax Policy on GDP Per Capita

At its heart, the model enables users to input values of different taxes to assess the impact of policy changes on the wider economy. To understand the mechanics of this, it is first important to describe qualitatively how the model has been constructed. As outlined in the theoretical approach section, this follows the London Business School methodology[99] , building up aggregate demand from its individual components. The examples of consumption and investment are described in the following:

[99] [Accessed Oct 2023] https://www.nuffield.ox.ac.uk/economics/Papers/2020/2020W01_MacroHist18.pdf

Consumption

The model includes a function to estimate the value of consumption at the aggregate level. Consumption is theoretically impacted by a range of variables, with one key factor being real personal disposable income. Real personal disposable income is in turn impacted by the policy environment, including personal tax burdens, which will be added to the model exogenously. In considering taxes, we analyse the overall personal tax burden, as well as specific taxes such as Income Tax and National Insurance contributions. It is also impacted by several other variables that will be determined endogenously, such as inflation and earnings. The exogenous policy environment and the endogenous variables will henceforth be referred to as the fundamental variables of the model.

Real personal disposable income is of course not the only economic variable impacting consumption. Another theoretical channel is that of wealth effects, with theory suggesting a positive relationship between the value of households' assets and present consumption. Asset values are in turn impacted by monetary variables, such as the money supply and the real interest rate, via the asset price channel. As such, the finalised consumption equation will account for these factors, allowing us to explore the impact of monetary variables on the real economy.

Equations have been constructed to consider the impact of these fundamental variables on real disposable income and perceived wealth and hence their impact on consumption. We will account for more general economic development by adding a time trend. Periods of particular economic volatility, notably the covid-pandemic, will be accounted for by appropriate dummy variables. Other control variables beyond those listed in this simplified example will also be considered.

The equation system could be summarised as:

$$(1)\ \ Consumption = f(RPDI, Perceived\ wealth) = \beta_0 + \beta_1 RPDI + \beta_2 Perceived\ wealth + \beta_3 Pandemic\ dummy + \gamma t + \varepsilon$$

$$(2)\ \ Real\ personal\ disposable\ income\ (RPDI) = f(Earnings,\ Inflation,\ Personal\ tax\ burden) = \beta_0 + \beta_1 Earnings + \beta_2 Inflation + \beta_3 Personal\ tax\ burden + \ldots + \gamma t + \varepsilon$$

$$(3)\ \ Perceived\ wealth = f(Money\ supply,\ Real\ interest\ rate,\ Nominal\ asset\ value) = \beta_0 + \beta_1 Money\ supply + \beta_2 Real\ interest\ rate + \beta_3 Nominal\ asset\ value + \gamma t + \varepsilon$$

While the above equations have been described linearly, in fact other functional forms have been considered during the construction process to determine the most appropriate way to model the relationships between these variables.

Investment

In the case of gross capital formation, a series of equations has been hypothesised to determine the relationship between the fundamental variables and investment. Theoretically, investment is driven by the real interest rate and the business tax burden. These drivers will be included as explanatory variables within the model. Other factors driving investment include general economic stability, which will be captured by including indicators such as lagged gross domestic product (GDP) or the regulatory environment into the investment equation.

In the business case, we consider the sensitivity of investment to the overall business tax burden, as well as specific taxes such as corporation tax taking into account factors that affect the tax base. Investment itself is a key factor in determining the level of capital stock within the economy. Given that capital is an important element of production, this offers a further channel to influence growth.

Since consumption and investment are major components of GDP, and hence GDP per capita, we can use the hypothesised structural equations to build a picture in which the tax policy environment has an impact on output and growth.

The Labour Market

The above examples of consumption and investment are not exhaustive of our proposed theoretical model. We also consider other economic variables that are theoretically impacted by the policy environment. Further channels to consider will include the response of labour supply and migration to tax policy changes. We have segmented these labour market responses by strata, capturing divergence between those at the higher end of the income spectrum and those at the lower end. This labour supply and migration analysis will be informed by demographic forecasting. This involves forecasting employment by occupation and industry at the aggregate and regional level, as well as the size of the population.

The Shadow Economy

The model also assesses the impact of tax policy changes on the size of the shadow economy. This has drawn previous experience of assessing movements between the real and shadow economies as a result of fiscal changes, which was considered at length in a previous workstream for the TaxPayers' Alliance. To close the model, we will also build a picture of how the broad economic indicators themselves have impacts on other variables, notably inflation and employment.

Empirically Testing the Growth Commission Model

Having established a series of theoretical equations explaining the link between the policy environment and broad economic indicators, and hence the impact of policy on growth, the model was empirically tested using official economic data, from sources such as the Office for National Statistics and the Bank of England.

The tests were made using R, a statistical package. This enabled the modellers to determine which of the hypothesised channels have had a statistically significant impact on output, and hence growth, in the past. Through this exercise we also determined the parameter values, as denoted by the coefficients in Equations 1, 2, and 3 of the previous section. These parameter values represent elasticities, that is, the sensitivity of economic variables to changes in other variables.

In the empirical section, the modellers conducted a range of diagnostic tests on the overall model and its constituent equations to make sure of its statistical robustness. Tests included sensitivity analysis to assess the stability of the model's predictions and back testing to identify systemic biases. Appropriate steps to adjust the model parameters have been taken following the results of these tests.

Where official data are lacking, we conducted a review of academic literature to determine the sensitivity of variables to changes in the policy environment. A key example is in assessing the impact of tax policy changes on the shadow economy, the size of which is not (obviously) captured well by official sources.

Appendix 2

Costing the Policy Recommendations

This section describes how we have costed our policy recommendations both using the two models described in Appendix 1 and using off-model analysis.

We have measured the impact of each policy recommendation put forward and assessed its impact on GDP (behavioural change) and the fiscal cost/gain associated with the policy over the period to 2043/44 had there been no GDP effect. The latter is our estimate of the equivalent to the Red Book estimate[100]. The actual cost of any measure is the sum of its 'No effect fiscal cost' minus the fiscal gain resulting from its GDP effects.

[100] (eg for the March 2023 Budget it was presented as a separate costing booklet https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1142824/Costing_Document_-_Spring_Budget_2023.pdf) .

Table 16

Growth Commission policies impact on GDP per capita (per cent)

	2024-25	2025-26	2026-27	2027-28	2028-29	2044-45
Planning and housing	0.1	0.4	0.7	0.8	1.0	6.4
Energy and smart green	0.0	0.1	0.2	0.6	0.8	2.2
Labour market	0.2	0.4	0.8	1.0	1.1	1.9
Minimum wage	0.0	0.1	0.2	0.3	0.4	0.8
Infrastructure	0.0	0.2	0.4	0.6	0.8	1.4
Public sector productivity	0.0	0.6	1.0	1.7	2.5	4.4
Welfare and pensions	0.0	0.0	0.0	0.6	0.9	1.6
Abolition of inheritance tax	0.0	0.0	0.1	0.3	0.4	1.4
Lower corporation tax	0.0	0.1	0.4	0.9	1.2	2.6
Income tax	0.0	0.0	0.2	0.6	1.3	1.3
Tourism tax	0.0	0.2	0.4	0.4	0.4	0.4
CBAM and other trade openness	0.0	0.3	0.6	0.9	1.2	1.5
Reduce migration to 150k	0.1	0.2	0.3	0.4	0.5	2.1
Total	0.4	2.6	5.3	9.1	12.5	28.0

Table 17

Growth Commission policies impact tax cost as % of GDP

	2024-25	2025-26	2026-27	2027-28	2028-29	2044-45
Planning and housing	0.0	0.3	0.5	1.0	1.0	1.0
Energy and smart green	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Labour market	0.0	0.0	0.0	0.0	0.0	0.0
Minimum wage	0.0	0.0	0.0	0.0	0.0	0.0
Infrastructure	0.0	0.5	1.0	1.5	1.5	1.5
Public sector productivity	0.0	-0.6	-1.0	-1.7	-2.0	-4.4
Welfare and pensions	-0.5	-0.5	-0.6	0.0	0.5	0..5
Abolition of inheritance tax	0.3	0.3	0.3	0.3	0.3	0.3
Lower corporation tax	1.0	1.0	1.0	1.0	1.9	1.9
Income tax reforms	0.3	0.9	1.5	2.2	2.5	2.8
Tourism tax	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
CBAM and other trade openness	0.0	0.0	0.0	0.2	0.4	1.0
Reduce migration to 150k	0.3	0.3	0.5	0.5	0.7	2.7
Higher spending on defence and service	0.2	0.4	0.6	0.8	1.0	2.0
Total	1.4	2.4	3.6	5.6	7.6	9.1

Impact of Planning and Housing

We have a range of policies here. We have costed them separately using the various models plus off model analysis. We have generally put more emphasis on the off model analysis. However the ACMD model shows the scale of gains possible if the UK optimises its regulatory performance based on the three pillars and thus represents the delta between where we are now and where we could be. The optimisation is based on the best performer and should therefore be achievable if the UK follows the right policies.

We have divided this into the impact on housing, on retail and hospitality and on the rest of the economy. There are a number of policies that would contribute to this GDP per capita gain figure.

Planning and housing policies to reduce the cost and time to register property could result in an improvement in the Property Rights Index. This could in turn lead to an increase in GDP per capita of 0.2% to 0.4%[101]. Similarly, the Domestic Competition Index could increase through an improvement in the "Regulatory Quality" sub-component, which is based on the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Improvement in these sub-scores could lead to increases in GDP per capita of up to 0.3-0.4%[102]. These are small beer however, compared with the potential gains that might accrue from improving planning.

[101] This represents the GDP per capita increase from an improvement in the sub-score to the same level as the best performing country.

[102] Same as above. It should be noted however that many factors other than housing and planning policies also impact Regulatory Quality.

Housing

The CBI/RICS task force on planning 'Shaping the Nation'[103] estimated that the capital cost of the excess price of houses caused by planning restrictions was £78 billion at 1987 values, causing an annual loss to the economy of 1.9% of GDP.

Studies quoted in the Economist[104] show significant crowding out impacts from high house prices, damaging the growth of the rest of the economy.

In the US a very detailed micro study looking at bank branches found that found that a one-standard-deviation increase in house prices in areas where a bank has branches reduced lending growth to firms that borrow from the same bank by 42%. The total investment undertaken by the affected firms fell by 21%[105]. Similarly a study from China showed that based on data from manufacturers in 172 Chinese cities that a 50% increase in property prices would raise borrowing costs, reduce investment and productivity, and result in a 35.5% decline in the firms' value-added output[106].

Overall we have translated these effects into upgrading the CBI/RICS figure from 1.9% to 2.9%.

Retail and Hospitality

The McKinsey study commissioned by Gordon Brown attributed the bulk of the 40-50% of the productivity differential in the hospitality and retail sectors in the UK compared with the US to the inefficiencies and lack of competition caused by the planning system[107].

[103] CBI, Shaping the Nation – Report of the Planning Task Force, November 1992

[104] [Accessed Oct 2023] https://www.economist.com/finance-and-economics/2022/07/28/how-high-property-prices-can-damage-the-economy

[105] 'Housing Price Booms and Crowding-Out Effects in Bank Lending' Indraneel Chakraborty University of Miami; Itay Goldstein' University of Pennsylvania; Andrew MacKinlay Virginia Tech, Journal of Financial Economics 2018 https://finance.wharton.upenn.edu/~itayg/Files/realestatebubbles-published.pdf

[106] Hau, Harald and Ouyang, Difei, How Real Estate Booms Hurt Small Firms: Evidence on Investment Substitution (May 2, 2018). Swiss Finance Institute Research Paper No. 18-38, Available at SSRN: https://ssrn.com/abstract=3174761 or http://dx.doi.org/10.2139/ssrn.3174761

[107] McKinsey Global Institute, Driving productivity and growth in the UK economy, October 1, 1998 | Report

This implies a loss of productivity in these sectors alone equal to about 3% of GDP.

This is backed up by a very recent study carried out by the University of Toronto on the Texas lodging industry which suggests that differential competition cause by zoning has a huge impact on the industry[108].

Although the McKinsey study was carried out a long time ago we would be very surprised if the number were lower, so we have used that figure as a cautious estimate of the impact.

Rest of the Economy

We have used the estimates from the improvement in the Property Rights part of the micro model to measure the impact on the rest of the economy. These give an impact on GDP of 0.7% of the rest of the economy (which accounts for 74.6% of GDP)[109]. So this impact is 0.5% of GDP.

Total Impact of Planning

Adding up these effects, they amount in total to 6.4% of GDP from planning and housing.

[108] Land Use Regulation as a Barrier to Entry: Evidence from the Texas Lodging Industry, Junichi Suzuki University of Toronto January 23, 2013

[109] [Accessed October 2023] https://commonslibrary.parliament.uk/research-briefings/cbp-8353/

Housing

Competition in energy markets is picked up by the micro model in the following sub-variables:

- Cost of energy
- Time to get electricity

Improving those to the highest scoring country is associated with a GDP per capita increase of 0.3%-0.4%[110].

In addition we have used the macro model to understand the impact of reducing energy costs on the economy based on the published impact that Cebr calculated of the impact of the Ukraine war (but obviously taking out the trade effects)[111]. This models the impact of the higher energy prices resulting from the Ukraine war with a long-term impact of a rise of on average 50% was assumed, though the initial impact was higher.

For this exercise we assumed that the policies on energy competition and on smart net zero would reduce the prices of all energy by 20% - we based the calculation on the difference between the UK price and the average of those of near competitors. We used the simulation as a base but then excluded the sanctions and exports impact in the Ukraine war simulation and then scaled down the impact by 2/5ths. This gives a total GDP impact of 1.8% of GDP. To which we have added the central estimate for the results of the micro model. The total is 2.15%.

We also estimated a small reduction (0.1% of GDP) in public spending. This is low because the bulk of the savings are passed on to the consumer.

[110] This represents the GDP per capita increase from an improvement in the sub-score to the same level as the best performing country. The lower end of the range is the result from a model which controls for both country and time fixed effects whereas the higher end of the range is given by the model with country fixed effects.

[111] [Accessed October 2023] https://cebr.com/wp-content/uploads/2022/03/Cost-of-Russian-invasion-of-Ukraine-for-the-UK-economy.pdf

Labour Market

We used the micro model to estimate the GDP effect for this. The UK's 2019 Labour Freedom Score is 5.4 (1-7 index). Australia in 2019 is 6.0 - optimising to this level means the domestic competition index increases by an amount associated with 1.82-2.00%[112] gain in GDP per capita on average. If also of interest, the highest Labour Freedom Score in 2019 was achieved by Singapore (6.5). Optimising to this level means domestic competition index increases by an amount associated with 3.33-3.66% gain in GDP per capita on average.

We assumed optimisation on the Australian level since the country appears to be a closer comparator to the UK than Singapore. Our estimated impact on GDP is the centre of the range at 1.9%.

Minimum Wage

We simulated a one year freeze to the minimum wage on the macro model. The model estimated a GDP gain of 0.8% and an employment gain of 1.0%.

Infrastructure Spend

We have a range of proposals for infrastructure changes. Those for housing and energy are covered elsewhere so this section looks at transport changes.

The proposal is for spending an additional 1½ % of GDP on transport infrastructure. And more ambitiously for a range of changes to charging for roads. As the latter is likely not

[112] The range is informed by the two different coefficients resulting different specification of the regression. The lower end is informed by the POLS with both Country and Time effects model, the upper end is the POLS with just Country effects model. This range is consistent with the previous figures shares.

to be implemented soon we have not included the estimated 2% gain to GDP from their implementation. We have estimated that spending this additional amount on infrastructure would add 1.4% to GDP based on a range of studies[113].

Public Sector Productivity

Our proposal is to reverse the slide in public sector productivity and when this has been done to achieve a 1% per annum increase for 19 years. This gives a total increase compared with the base of 28.4%. We have multiplied this by the share of the economy in the public sector. This is the sum of the proportions of the economy [114] in public administration and defence (4.9%), the proportion of the public sector in education and the proportion in health. After excluding the private sector in health [115]and education[116] this gives a total of 15.9%.

We have deliberately made no allowance for the likely additional productivity as the resources are transferred to the private sector so our estimates are on the cautious side. The 28.4% gain in productivity of 15.9% of GDP gives a boost to GDP of 4.4% over 20 years.

We have also allowed for an additional 2% of GDP to be spent on areas of the economy where needs are likely to rise as a result of demographic changes and on defence.

[113] Many of these studies have been carried out by Cebr including studies on Crossrail, the East London Line and upgrading the London Underground. But our conclusions are supported by some of the more recent studies including https://www.sciencedirect.com/science/article/pii/S0967070X23000239

[114] [Accessed October 2023] https://commonslibrary.parliament.uk/research-briefings/cbp-8353/

[115] [Accessed October 2023] https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthcaresystem/bulletins/ukhealthaccounts/2021

[116] [Accessed October 2023] https://www.isc.co.uk/research/#:~:text=The%20UK%20independent%20sector%20as,of%20school%20children%20in%20England.

Welfare and Pensions

We have used the macro model to model the impact of increased incentives to join the labour market from welfare reform. This build up to 1.5% eventually. We have also costed measures and have allowed for additional spending of 1/2 % of GDP for proactive labour market measures.

Inheritance Tax

We have commissioned an off model study of the impact of abolishing inheritance tax which has looked into the economic impact in some detail and its conclusions are described in the section on the tax in the main part of the report.

Corporation Tax

We have simulated the impact of the early cut to 19% and the eventual cut to 15% for corporation tax on the macro model plus the incorporation of the full expensing regime as a permanent feature. This gives an ultimate impact of 3.0% of GDP but a cost of 1.9% in net tax losses at constant GDP. Our assessment is backed by an early assessment by the Tax Foundation[117] looking at the impact of full expensing. We have not taken into account any potential benefit from a gradual change in corporate finance to a more sustainable system.

[117] [Accessed October 2023] UK Business Investment Increases After Pro-Growth Tax Reforms (taxfoundation.org)

Income Tax Reforms

Our estimates of the economic impact of the income tax reforms are from a simulation on the macro model. These give an estimate of a gain of 1.3% of GDP from the supply side and an increase in fiscal cost at unchanged GDP of 2.2%. It should be noted that the fiscal 'cost' is a transfer from the fiscal authorities to households so should not be compared with the gain to GDP which is extra 'new' output. The GDP effect probably builds up further as well.

Tourist Tax

We have used the updated estimates in the Cebr report on this[118].Recent Cebr research showed that the reintroduction of a VAT Retail Export Scheme could have added £10.7 billion to the UK economy in 2023, if fully utilised by visitors. This could have provided a net boost to tax revenues of £2.3 billion. Cebr estimates that this could reach £11.6 billion by 2025, assuming a return to pre-pandemic visitor numbers. This would add £2.5 billion on net to public finances in 2025. We have cautiously assumed that the long-term response is the same as the short term response.

CBAM Trade Openness

We have used the calculation from the micro model shown in the main part of the text.

[118] https://www.retailgazette.co.uk/resources/

Migration

We have gone into this calculation from the micro model shown in the main part of the text.

Timing

We have treated these effects as long-term effects and assumed that they will have fully taken place in 20 years time unless otherwise stated. Again unless otherwise stated, we have assumed that they build up gradually based on the timing calculated for the OECD study by Egert and Gal[119]. Where we have used the macro model, it provides its own timeline for the impacts.

[119] Égert, Balázs and Gal, Peter, The Quantification of Structural Reforms in OECD Countries – a New Framework, OECD Economics Department, working papers No. 1354.

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