

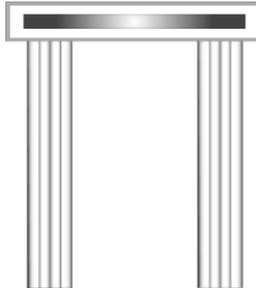


**David B. Smith**

**The Brexit Settlement and UK Taxes**

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The Brexit Settlement and UK Taxes

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## **THE AUTHOR**

David B. Smith is by background a city economist. He maintains his own macroeconomic forecasting model at Beacon Economic Forecasting and has been Visiting Professor at Derby Business School. His recent Politeia publications include *Banking on Recovery: Towards an accountable, stable financial sector* (as co-author, 2016) and *The UK Government Spending Ratio: Back to the 1930s?* (2015).

## Foreword

### Politics or Economics?

Many people puzzle over why the UK has offered to pay the EU c. £40bn for a Brexit Free Trade Deal. Not only is no such payment by Britain obligatory in law, but future UK-EU trade would continue in any case to take place under international trade law and WTO rules. These oblige both parties to offer most favoured nation (MFN) terms, facilitate customs arrangements and simplify those for land borders.

Although politically the £40bn could be seen as helpful for relations with the bloc and cast Britain as a ‘good neighbour’, economically the case *not* to pay £40bn to the EU but to keep the money in the UK economy after Brexit is compelling. As the economist David B Smith shows here, keeping £40bn in the UK in the years after 2019 would bring a significant Brexit boost.

The author explains the implications of using the money at home, providing the economic modelling for three likely scenarios considered in which the UK Chancellor:

- Keeps the money in savings
- Uses it for income tax cuts
- Uses it for VAT cuts

He shows that for each of these there would be good results for the UK on a number of counts. £40bn *kept here and not paid to the EU* would bring a real terms boost to UK GDP (by up to 1.4 per cent), its household consumption (by up to 3.5 per cent), its private investment (by up to 3.6 per cent). Meanwhile the unemployment rate would fall (by up to 0.8 per cent), and public sector borrowing (by 1 per cent).

David B Smith concludes that the need for enhanced micro-economic flexibility after Brexit is urgent. A first step would be to increase the free, private wealth-creating sector, particularly in those regions where government expenditure accounts for one half to three quarters of regional GDP.

Although the author avoids taking sides in the political decision of whether the UK should leave the EU without a deal and so keep back the EU £40bn, the economic consequences of doing so are very attractive. One doesn’t need to be a Nobel Prize winner to see that the £40bn cash bonus of a ‘no deal’ Brexit would give the UK economy a significant and quantifiable boost.

Sheila Lawlor,  
Director, Politeia.

# The Brexit Settlement and UK Taxes

## Introduction

### The costs to the taxpayer of an ‘orderly Brexit’?

The legal and constitutional complexities involved in Britain’s convoluted negotiations with its European Union (EU) counterparties have made it easy to lose sight of the opportunity costs of any putative settlement. Governments have no resources of their own, only those that they can expropriate from their citizenries. This means that all the expenditures that appear on one side of the public balance sheet – including the monies handed over to the EU – need to be matched by tax receipts or borrowing on the other. This truism is sometimes called the government’s budget constraint.

This analysis considers the tax implications of the financial transfers that the UK seems prepared to hand over in order to achieve an ‘orderly Brexit’. To be specific, the sums involved are initially compared with the tax ‘ready reckoners’ set out each year in *Direct Effects of Illustrative Tax Changes* published by Her Majesty’s Revenue and Customs (HMRC). The HMRC calculations make it possible to translate the sums being pledged to the EU on the expenditure side of the public accounts into the number of percentage points that have to be added to income tax or Value Added Tax on the revenue side of the public accounts, for example. The HMRC numbers represent ‘static’ first-round calculations, however, and do not allow for the consequences of changes in the rate of tax on wider economic behaviour. As a consequence, the second round and ultimate effects may end up very different from the initial static ones estimated by HMRC.

In order to capture some of these longer-run ‘dynamic’ effects, a number of simulations were then run on the Beacon Economic Forecasting (BEF) macroeconomic quarterly forecasting model. The basic simplifying assumption employed is that Britain leaves the EU at the end of March 2019 and refuses to hand over any more money thereafter. Instead, the money that has been saved is assumed to: 1) reduce public sector borrowing; alternatively 2) to cut the standard rate of income tax, or 3) to reduce VAT. There is no upper limit to how many such scenarios might be performed but these seem sufficient for this analysis.

One conclusion is that there would be substantial macroeconomic benefits from using a large proportion of the £15.1bn VAT and Gross National Income (GNI) to be contributed by the UK to the EU in 2019-20 to fund tax cuts. The HMRC calculations suggest that cutting income tax by 1 percentage point would cost £4.3bn in 2019-20, for example, while a corresponding reduction in VAT would cost £6.2bn. In theory, such arithmetic suggests that an ultra-hard Brexit might allow 3p to be taken off standard rate income tax or 2½% of VAT, other things being equal.

Such a development would not only have powerful demand effects in the short term, but also major, semi-permanent, supply side benefits in the long run. This does not mean that other losses resulting from Brexit, such as reduced export demand and the potential disruption to supply chains, might not outweigh the gains of a reduced tribute to the EU<sup>1</sup>. However, it does suggest that a bold reforming government has options that should be explored and considered if it proves difficult to achieve a reasonable settlement.

## The EU Financial Settlement

**Table 1: Britain’s VAT and GNI Based EU Contributions**

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<i>£’s billion</i>	10.1	13.2	15.1	14.2	14.1	14.0

Source: Office for Budget Responsibility *Economic and Financial Outlook*, 13th March 2018, Supplementary Table 2.40.

Table 1 (above) presents the official figures for Britain’s VAT and Gross National Income (GNI) based contributions to the EU given in the Chancellor’s 13<sup>th</sup> March 2018 statement. The VAT and GNI contribution are the main sum of money involved and official projections are available on a financial year basis. However, there are other ex-UK transfers involved and a UK abatement that reduces the sums handed over<sup>2</sup>. This is partly why we assumed a reasonably modest tax cut of just over £12bn in the model

<sup>1</sup> There is a widespread view that these trade effects would be damaging. For a contrary view see Minford P. *The Economics of Brexit: Getting the Best Deal for the UK* (2018).

<sup>2</sup> The OBR’s 13<sup>th</sup> March *Economic and Financial Outlook* has a detailed annex B on the *EU Financial Settlement*. Table B.1 (page 217) *ibid* gives some idea of the complexities involved. This is on a calendar year basis, however. While the issue does not seem to have been discussed, it seems improbable that the UK would keep its rebate and any similar concessions if Brexit was aborted.

simulations. The other reason is that this allowed for convenient round numbers to be employed where the assumed new tax rates were concerned<sup>3</sup>.

There appears to be a consensus that the total amount to be handed over to the EU will be roughly of the order of some £37bn to £39bn. The precise amount will depend on the outcome of the present negotiations but also the future euro/sterling exchange rate. This is because the liability is measured in Euro's. The UK has also accepted responsibility for various contingent liabilities, but these will be excluded from the calculations in this analysis and so not considered further here.

## **Direct Effects of Illustrative Tax Changes**

The HMRC tax ready reckoner considers the effects of changing over 70 individual rates of taxation. These include income tax, working tax credits, corporation tax, capital gains and inheritance taxes, national insurance contributions, customs and excise duties, VAT, the insurance premium tax and stamp duty, while separate figures are sometimes given for the effects of a cut or a rise. This is because the distribution of taxpayers changes as rates go up or down. Table 2 (below) summarises this more detailed information by concentrating on just a few of the more important taxes.

It is apparent from Table 1 that the sums of money being allocated to the EU would permit a noticeable reduction in the main rates of tax and/or the abolition of some smaller distortionary imposts, even on the purely static calculations used by HMRC. The most expensive change considered in the HMRC ready reckoner would be to increase all main income tax allowances, starting and basic rate limits by 10%. This would cost the exchequer £9.4bn in 2019-20, and £11¼bn to £11½bn in the two subsequent years, compared with the £14bn or so EU payment set out for 2021-22 and 2022-23 in Table 1.

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<sup>3</sup> It would not be unreasonable, albeit not precisely correct, to make a proportionate reduction to the calculations in Table 3, if it was felt that the assumed £12bn tax cut was too large.

**Table 2: Direct Effects of Some Illustrative Tax Changes (£'s million)**

	2019-20	2020-21	2021-22
Change basic rate income tax by 1P	4,300	4,850	4,850
Change all main income tax allowances, starting and basic rate limits by 1%	990	1,200	1,200
Increase Corporation Tax by 1p	2,000	2,600	2,600
Change class 1 employee main rate by 1p	4,000	4,100	4,200
Change class 1 employer rate by 1p	5,750	5,900	6,050
Change standard rate VAT by 1P	6,200	6,400	6,550

Source: HM Revenue & Customs, Direct Effects of Illustrative Tax Changes, 24<sup>th</sup> April 2018.

## The Dynamic Effects of Tax Changes

Purely static calculations such as HMRC's tend to misrepresent the longer term effects of changes in tax rates. This is because they do not allow for the second-round and subsequent effects on the wider economy, including the private sector tax base. It is a logically impossible for the government, or any other entity, to raise real resources by taxing itself. This is why GDP which includes government spending, and expenditures funded by government welfare, can be a poor guide to the taxable capacity of the economy when the share of government spending in GDP is changing.

It used to be standard practice for macroeconomic modellers to simulate the effects of changing key tax rates on their forecasting models, as well as other policy tools such as Bank Rate<sup>4</sup>. Indeed, it was virtually impossible for academic modelling groups to get research council funding in the late 1970s and early 1980s if they could not produce such a set of standard simulations. The conclusion drawn by the economists at Warwick, who undertook

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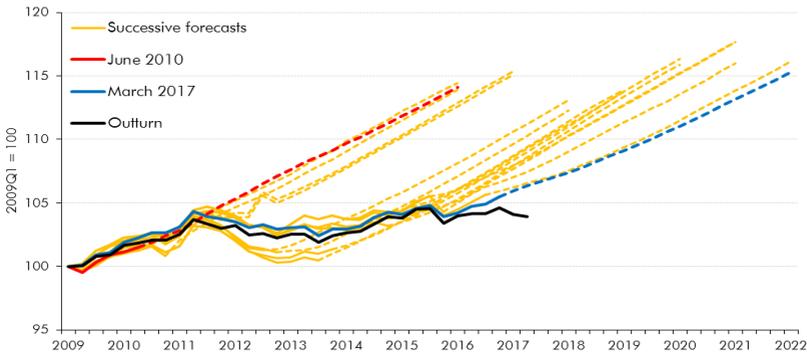
<sup>4</sup> This literature was reviewed in Smith (2006).

comparative simulations on all the leading official and academic forecasting models of the day, was as follows (Church et al. (1993) page 87):

In order to analyse the impact of the various fiscal policy instruments it is essential to consider both direct and indirect effect. For example, the direct effects of tax changes on the government finances can be quantified through an assessment of the size of the tax base to which the tax change is to be applied, and such calculations may measure the short run impact on government revenue quite well. However, over a period beyond the first few months following the tax change, the indirect effects through the operation of the economy as a whole come to dominate. Simulations of models of the macro-economy are the only method of quantifying the size and time profile of these indirect effects.

Unfortunately, there is now little interest in such work in academia while most contemporary forecasting models have shrunk and do not incorporate a rich enough range of policy tools. The Office for Budget Responsibility (OBR) model now sets trend growth exogenously, for example, and runs its forecasting model on the assumption that output eventually locks onto this assumed trend<sup>5</sup>.

**Chart 1: Successive OBR Productivity Forecasts (Output per Hour)**



Note: Solid lines represent the outturn data that underpinned the forecasts at the time (the dashed lines).  
Source: ONS, OBR

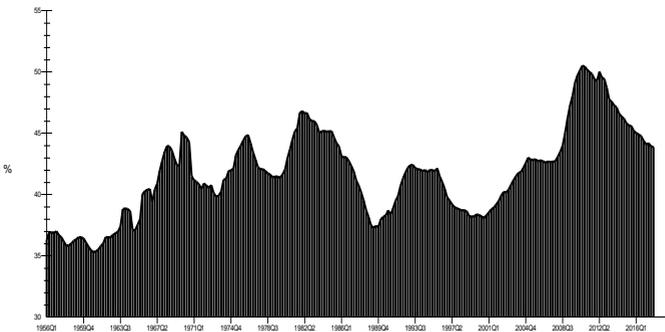
This makes it impossible to examine the effects of a major tax hike on trend national output – which would, in theory, both negatively shift down the level of activity and bend the trend downwards – and may explain why officialdom

<sup>5</sup> Something similar is done with inflation where the level of the CPI is predicted to lock onto its 2% target in the long run.

seems indifferent to the possibility that a highly taxed economy will grow more slowly than a more lightly taxed one<sup>6</sup>.

It also needs to be emphasised that changing the level and ‘shape’ of the tax system has implications for both aggregate demand in the short term and, more importantly, aggregate supply in the longer run. In contrast, increasing government spending may provide a short term Keynesian boost to home demand but ‘crowds out’ aggregate supply in the longer run, once this expenditure inevitably has to be funded through increased taxation or funding in the bond market<sup>7</sup>.

## Chart 2: Ratio of UK General Government Expenditure to GDP Measured at Factor Cost 1956 Q1 to 2017 Q4



## Three Alternative Scenarios

The Beacon Economic Forecasting (BEF) macroeconomic model has been employed for live forecasting since the mid-1980s<sup>8</sup> and has maintained the ability to simulate the effects of tax changes that was once the almost universal property of UK forecasting models. For the purposes of this note three alternative scenarios have been run up to the end of calendar 2025 or fiscal year 2025-26. All three scenarios assume that all payments from Britain to the

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<sup>6</sup> Chart 1 is taken from the OBR’s October 2017 *Forecast Evaluation Report* where it appears as Chart 1.1 on page 6. It reveals a persistent tendency to over-predict the level of national output. There is a noticeable resemblance between Chart 1 and Figure 10 on page 101 of Smith (2006) which shows the adverse effects of tax financed public spending on economic growth in a post-neo-classical endogenous growth model.

<sup>7</sup> Also, the level of spending remains relatively high by historic standards at not quite 44% of the factor cost measure of GDP in the most recent four quarters (Chart 2). This can be compared with the long run data run back to 1870 provided in Smith (2016).

EU cease at the end of the first quarter of 2019 – i.e., an acrimonious no-deal scenario. It is not being claimed that this is politically realistic but it does allow some exploratory analysis based on past relationships.

**Table 3: Differences from Base Run in Calendar 2025 or Fiscal Year 2025-26**

	No Tax Cuts Scenario	2½ % of Standard Rate income Tax Scenario	2% off VAT Scenario
<i>Levels</i>			
Real GDP	+0.1	+1.5	+1.4
Real Household Consumption	+0.5	+3.5	+3.3
Real Private Investment	+0.8	+3.6	+3.5
Consumer Price Index	-0.2	-0.4	-2.2
LFS Unemployment Rate (%)	-0.1	-0.8	-0.8
Sterling Index	+1.1	+2.5	+2.5
Bank Rate	-0.1	-0.1	-0.2
M4 <sup>ex</sup> Broad Money	+0.4	+2.2	+1.6
<i>Ratios to Basic-Price GDP (%)</i>			
Balance of Payments Current Account	-0.3	-1.0	-1.0
Public Sector Net Borrowing	-0.9	-0.2	-1.3
Total General Government Expenditure	-0.7	-1.4	-1.7
Non-oil Taxes	+0.3	-1.1	-0.4

Source: Simulations on Beacon Economic Forecasting model carried out on 28<sup>th</sup> April 2018.

The first scenario simply assumes that the UK ceases to pay any further sums to the EU after 2019 Q1 but that the relevant amounts are simply saved. Scenario two assumes that the standard rate of income tax is reduced by 2½ percentage points, while the final scenario assumes that the money saved is used to cut VAT by 2 percentage points. These changes were rather arbitrarily chosen because the ex-ante rate reduction amounted to somewhat over £12bn in both cases in 2020-21 according to the HMRC ready reckoner. The results of this exercise are summarised in Table 3. For the sake of clarity, this only

shows the end point differences from the base run in 2025 or 2025-26 by which time the model has fully settled down.

Because the money handed over to the EU represents a pure deadweight loss where the UK economy<sup>9</sup> is concerned, with no short run demand side benefits and adverse supply side consequences arising from the need to fund the expenditure, it should not be surprising that even the no tax cuts scenario sees modest gains from the Chancellor simply pocketing the money. In particular, household consumption is some ½% higher by 2025 and private investment up by ¾%, although the gains to overall GDP are largely offset by higher imports, which are a negative item in the GDP identity. Perhaps slightly more surprising is that the budget deficit ends up almost 1 percentage point of GDP lower by 2025-26. This reflects the tendency of deficits to feed on themselves as each year's deficit adds to the government debt stock and debt servicing costs.

More intriguing are the results of the two tax reduction scenarios which suggest that the UK may now be on the wrong side of the aggregate Laffer curve. In both cases, household consumption and private investment end up some ¾ to 3½ percentage points higher than in the base run, while overall GDP ends up some 1½ percentage points higher, despite the leakage into increased imports. The main drawback of both tax cutting scenarios is the deterioration of some 1 percentage point of national output in the balance of payments. However, there is also an improvement in the Labour Force Survey (LFS) measure of unemployment of around ¾ percentage point. Otherwise, and unsurprisingly, the VAT cut scenario delivers a significantly lower consumer price index (CPI) by 2025 and also a more substantial reduction in government borrowing of 1.3% of GDP in 2025-26 compared with a reduction of 0.2% in the reduced income tax model run.

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<sup>8</sup> According to the annual Sunday Times review of around 35 UK macroeconomic forecasters, the BEF forecasts came in at no. 11 in 2014, followed by 6 (2015), 12 (2016) and 9 (2017). The latest BEF forecasts are summarised each month in the forecast comparisons compiled by HM Treasury and Consensus Economics. The base run used here does not appear wildly out of line with the current consensus. However, the precise BEF projections inevitably change with each new official data release, which is why they have not been discussed further here.

<sup>9</sup> The most likely indirect consequence would be a lower exchange rate. However, economists do not agree whether this would be benign, because of increased competitiveness, or malign because of reduced living standards.

## Conclusions

There are six general conclusions from this analysis.

- First, these simulations suggest that the need to finance the large sums of money handed over to the EU may have acted as a cumulative drag anchor on the British economy and partly contributed to persistent Budget deficits<sup>10</sup>.
- Second, George Osborne's decision to hike the rate of VAT from the 'emergency' 15% prevailing when he became Chancellor<sup>11</sup> to 20% was economically damaging and badly hindered the subsequent recovery<sup>12</sup>.
- Third, it would make political, as well as economic, sense to offset any negative consequences of Brexit on economic activity by cutting the tax burden, even if this implied slightly larger budget deficits in the very short term. The experience of the 1980s suggests that the announcement of a well-articulated programme of supply friendly tax reforms leads to an appreciating currency, not a weaker one, and a surge in private capital formation as international capital flows to the places where anticipated post-tax returns are highest.
- Fourth, a VAT reduction may be more effective in achieving desirable policy goals than an equivalent reduction in the standard rate of income tax. However, this is only a tentative conclusion. It would be useful to see

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<sup>10</sup> The 'Big Government' policies of Gordon Brown, first as Chancellor and then as Prime Minister were significantly larger in their adverse consequences, however. In 2010, the ratio of general government expenditure to factor-cost GDP was around the same level as the peak recorded at the height of the 1914-18 'Great War'. It is hardly surprising that the UK economy has consequently suffered many of the phenomena associated with wartime finance including weak private investment, chronic fiscal deficits, tight labour markets, soaring public debt and financial repression.

<sup>11</sup> This had been cut from its previous 17½% as a response to the 2008 financial crisis. A return to 17½% would have been defensible. It was the extra 2½ percentage point hike that was, arguably, indefensible.

<sup>12</sup> More generally, George Osborne's policies can be considered a perversely damaging 'timorous' Type 2 fiscal retrenchment from the viewpoint of the fiscal stabilisation literature, in that his substantial tax hikes were front-end loaded and overall spending cuts almost negligible. Type 2 retrenchments usually damage growth and fail to achieve their public borrowing targets. This contrasts with Type 1 retrenchments in which taxes are not raised and public consumption is reined back at the outset (Smith (2006), Tanzi (2008) and (2011)). The real charges against Osborne are that: 1) having inherited a dreadful fiscal position from Gordon Brown, he failed to rise to the occasion with the needed boldness and determination, and 2) he unduly complicated an already labyrinthine tax structure for political reasons, in a manner that was highly perverse from the viewpoint of the public-finance literature.

comparable simulations performed using other macroeconomic forecasting models with properly specified endogenous supply sides. This is true of all the analysis presented in this note.

- Fifth, the previous conclusion does not mean that the crazy ‘Manhattan Skyline’ of marginal tax rates on income that has resulted from the withdrawal of tax credits and the interaction between National Insurance and income tax should not be tackled aggressively through tax simplification and reform<sup>13</sup>. Relatively major cuts in many distortionary tax rates could be achieved at relatively small cost relative to the UK’s contribution to the EU and would probably more than pay for themselves in the long run.
- Finally, one thing that is clear about Brexit is that will require a much enhanced level of micro-economic flexibility if the whole matrix of domestic production is to be rejigged to meet the demands of the new environment. Such flexibility is unlikely be achieved in a highly taxed and highly regulated economy like modern Britain’s. This is because the free, private wealth-creating, sector is simply too small; particularly in those regions where general government expenditure accounts for anything from over one half up to three quarters or more of regional GDP (Smith (2016) pages 61-65). Unfortunately, there is now a massive policy inconsistency between the current approach - authoritarian, anti-market and highly interventionist - and the market-liberal pro-supply policies needed to make Brexit a success.

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<sup>13</sup> See Sinclair (2012) for one such programme of reforms.

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