Restructuring the UK Tax System: Some Dynamic Considerations

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by

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Introduction

There is no mystery about the features that should be found in a well-designed tax system and these have been broadly known since Adam Smith's maxims appeared in Volume 2 of *The Wealth of Nations* in 1776. A well-designed tax system should have the following features.

First, taxes should be imposed at the lowest rate possible, in order not to distort economic behaviour at the margin. Taxes should be flat rate and proportionate to the ability to pay, and the cost of collection should be low relative to the yield.

Second, the tax system should be as simple as possible – to reduce compliance costs – and there should be minimal exemptions. Exemptions encourage lobbying and, potentially, corruption.

Third, citizens should know the structure and the level of tax facing them – and also the means and timing of payment – with as much certainty as possible. Otherwise, long-lived investments, including in human capital, will not be undertaken. The justification for budget deficits in a recession is 'tax smoothing' not their alleged stimulatory effects.

Fourth, taxes should not be discriminatory between citizens, either as individuals, as a class, or as a region – in the way that stamp duty on house purchases now is, for example.

Fifth, arbitrary windfall taxes and retrospective tax changes are economically damaging, because of the uncertainties they create for economic agents. But they are also an affront to the rule of law. People who advocate such taxes are no better than Tudor tyrants such as Henry VIII or the Bourbon monarchs of France.

The next section of this paper will consider the macroeconomic aspects of tax policy. But one point should be emphasised immediately: that in a globalised international economy, the consequences of a bad tax system in driving physical, human and financial capital elsewhere are far larger and faster than they were in the 1970s, for example. One of the reasons large budget deficits are harmful is that international business people calculate that these will mean both higher future taxes and increased tax-induced uncertainty, with the result that they decide to locate their enterprises elsewhere.

The growth of Leviathan

The Laffer curve is the idea that, if you plot the rate of tax on the horizontal axis and tax receipts on the vertical one, you get an inverted 'U' shape akin to the normal distribution in statistics. The implication is that there are normally two points on the Laffer curve that will generate the same amount of tax. Also, beyond the peak of the Laffer curve higher rates of tax mean falling receipts. There are numerous micro-Laffer curves that vary from tax to tax. People who have looked at the evidence have concluded that the 50% higher rate of Income Tax – which is actually a 57% penalty on the worker's marginal product after allowing for National Insurance contributions (NICs) – and the new 28% rate of Capital Gains Tax will both be on the wrong side of their respective micro-Laffer curves and will destroy revenue, output and jobs.

The bigger question is whether the British economy is on the wrong side of the aggregate Laffer curve. If it is, any attempt to tax one's way out of the fiscal deficit is: 1) doomed to failure; and 2) likely to produce a downwards spiral in private activity and the tax base. The answer to this question is by and large 'yes'. One reason is the current unprecedented peace-time size of the government sector, not just in Britain but in many other mature economies as well (see: Table A for an international comparison and Table B for a regional breakdown of the UK).

A previous paper examined the size of the UK public sector back to 1900 (Smith, 2009). One conclusion was that it was better to use the factor cost-measure of Gross Domestic Product (GDP), which excludes indirect taxes, rather than the officially-preferred market-price GDP figure, which is gross of indirect taxes. The difference is noticeable, especially when indirect taxes are rising. The 29th November 2010 Office for Budget Responsibility (OBR) projections indicated that general government spending would be 46.5% of market-price GDP in 2010-11 (down 0.9 percentage points on the year) whereas the equivalent ratio using the factor cost measure will be 53.0% (down 0.5 percentage points on 2009-10). Incidentally, the long-range OBR forecasts show the market-price spending ratio at 39.8% in fiscal 2014-15 and the factor cost measure at 45.7%. The latter can be compared with the 46.5% ratio observed between calendar years 1916 and 1918, when World War I was at its peak.

The model-based evidence

It is logically impossible for the government to tax itself in any economically meaningful sense (Table C). It is correspondingly arguable that, with non-oil taxes equivalent to more than 78% of residual private-sector GDP measured at factor-cost, we are unambiguously on the wrong side of the macro-Laffer curve. However, economies are complex, dynamic systems with many feedbacks. This means it is necessary to look at the evidence from macro-economic forecasting models. This takes one straight into the territory of the OBR. The 2006 IEA monograph *Living with Leviathan* (Smith, 2006) included the following 1993 quotation from the University of Warwick macro-economic modelling bureau:

> 'In order to analyse the impact of the various fiscal policy instruments it is essential to consider both direct and indirect effects. For example, the direct effects of tax changes on 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 these 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.'

This insight is crucial, given the fiscal adjustment that the nation now faces. The easiest course from a political-economy perspective may be to appease the spending lobbies while surreptitiously raising the tax burden on the rest of the community. The front-end loading of the VAT hike, and the rear-end loading of the spending cuts, suggests that the coalition government may have embarked on this course.

However, a simulation of the effects of the VAT increase on the Beacon Economic Forecasting model suggests that the 20% VAT rate will both destroy output and jobs and exacerbate the budget deficit by some ¼ to ½ a percentage point of GDP. This implies that the VAT hike at the start of 2011 was a serious 'own goal'. This mistake could have been averted if the government had: 1) paid attention to the existing macro-economic modelling evidence; or 2) had asked the OBR to do an equivalent run on the HM Treasury model. However, there is a danger that the OBR will always end up advocating higher taxes as the solution to the deficit problem because the methodology that they inherited ignores the crucial second-round effects of tax- and deficit-financed government spending on private sector output and employment.

Growth studies

This danger is exacerbated by the fact that the OBR has been largely staffed by former/seconded HM Treasury officials in addition to the fact that it currently runs the HM Treasury forecasting model. One technical reason why the HMT model has almost no supply-side effects incorporated in it is that the model is run on the assumption that national output quickly locks onto a pre-determined growth trend. This trend is extrapolated using external assumptions about productivity, working hours, the employment rate and population. However, none of these assumptions have any behavioural content, and an income tax rate of 100% would appear to have the same implications for trend growth as one of zero. In addition, the model appears to be run on the assumption that inflation proceeds at its target rate after the first six months or so, according to comments by the former Interim OBR member, Mr Geoffrey Dicks, at a meeting of the Society of Business Economists on 12 January 2011. All of this means that the adverse second-round effects of tax and spending policies on output, employment, prices and the tax base are never properly considered. Instead, the government is treated as being in the equivalent position to a monopolist facing a perfectly inelastic demand curve.

The resulting undue complacency about the effects of big government contrasts sharply with the rule-of-thumb, which emerges from thirty-five years of international studies, that adding 1 percentage point to the government consumption ratio reduces the growth rate of real national output per head by 0.15 percentage points. The 8.4 percentage point rise in the British government spending ratio between 1996-2000 and 2006-2010, a comparison that smoothes out the recent recession, would correspondingly be expected to reduce growth by 1¼ percentage points. The implication is that the UK's sustainable growth rate may now only be some 1½%. Against this background, the government's main priority should be the nurturing of the private sector's supply side, if for no other reason than the selfish one that this constitutes the tax base.

Unfortunately, neither politicians nor their advisors seem aware that they have a problem in this respect.

Concluding remarks

One reason that the structure of the tax system has not been addressed in more depth in this paper is that this issue is less important, in terms of social cost-benefit analysis, than the damage that will result if the fiscal authorities continue to ignore the adverse dynamic effects of increased taxes.

This does not mean that the details of the tax structure are unimportant. There are clearly 'free-lunch' gains to be achieved by cutting high marginal rates wherever these are beyond the revenue maximising point on the micro-Laffer curve. The policy aim should be to trigger off a virtuous self-reinforcing circle of increased output, higher tax receipts, further supply-side friendly tax cuts etc. bootstrapping the economy on to a new permanently higher growth path.

However, it is noteworthy that for two decades the Conservatives have never tried to challenge intellectually the pro-big-spending and high-tax, anti-libertarian rhetoric which Labour and Liberal-Democrat politicians employ so freely. The UK political debate simply treats as non-existent the massive body of international research on the issue, much of which comes from unimpeachable bodies such as the OECD and the IMF. This may be because any intellectually-serious analysis cuts across party lines and cannot be reduced to sound bites.

The earlier comment on the damage done by the increased rate of VAT does not mean that alternative tax increases would not have been more harmful, particularly the proposal that NICs should have been raised instead. The issue of 'Good, and Bad, Buys in Taxation' was raised in *Living with Leviathan* (Smith, 2006). One conclusion that emerged was that direct surcharges on employment costs – i.e. Employers' NICs – were the most damaging tax of all and the one impost where the adverse Laffer curve effects were most powerful and least disputable. As with the other second-round effects, there is a vast literature that ought to be incorporated in the UK political debate but currently is not.

Finally, it is noteworthy that, while the government will be spending 53% of factor-cost GDP this year, very little of this expenditure will be on the 'primary' governmental functions of defence (3.1% of GDP) and law and order (2.7%). Even including debt interest, this only brings the primary total to a 'Gladstonian' 9.2% of GDP (Table E). In contrast, almost 83% of government spending and 44½% of factor-cost GDP consists of 'secondary' functions, with social services, health and education summing to 62¾% of spending and 33¾% of GDP. A properly informed debate would involve simulating a wide range of alternative spending reductions and tax hike packages on the HM Treasury model – if it is up to the task – to examine which is the least economically damaging way out of Britain's fiscal wreck.

References

Smith, D. B. (2006) *Living with Leviathan: Public Spending, Taxes and Economic Performance*, London: Institute of Economic Affairs.

Smith, D. B. (2009) 'How Should Britain's Government Spending and Tax Burdens be Measured', Discussion Paper No. 24, London: Institute of Economic Affairs.

Appendix: Background material on the extent of the UK and international fiscal crises

Table A: Ratios of General Government Expenditure, Including Transfers, to Money GDP at Market Prices (%)

	1870	1913	1920	1937	1960	1980	2000	2010
Austral.	18.3	16.5	19.3	14.8	21.2	34.1	34.8	35.0
Austria	10.5	17.0	14.7	20.6	35.7	48.1	52.2	52.9
Belgium	-	13.8	-	21.8	30.3	58.6	49.1	53.9
Canada	-	-	16.7	25.0	28.6	38.8	41.1	43.5
France	12.6	17.0	27.6	29.0	34.6	46.1	51.6	56.2
Germany	10.0	14.8	25.0	34.1	32.4	47.9	45.1	46.8
Italy	13.7	17.1	30.1	31.1	30.1	42.1	46.1	51.4
Ireland	-	-	-	-	28.0	48.9	31.3	66.1
Japan	8.8	8.3	14.8	25.4	17.5	32.0	39.0	40.6
Nether.	9.1	9.0	13.5	19.0	33.7	55.2	44.2	51.2
NZ	-	-	24.6	25.3	26.9	38.1	38.8	44.2
Norway	5.9	9.3	16.0	11.8	29.9	43.8	42.3	46.6
Spain	-	8.3	9.3	18.4	18.8	32.2	39.1	45.1
Sweden	5.7	10.4	10.9	16.5	31.0	60.1	55.1	54.5
Switz.	16.5	14.0	17.0	24.1	17.2	32.8	35.1	33.6
UK	9.4	12.7	26.2	30.0	32.2	43.0	36.6	51.0
USA	7.3	7.5	12.1	19.4	27.0	31.4	33.9	42.2
Average	10.7	12.8	19.9	23.0	28.5	43.1	43.0	46.8

Source: Tanzi and Schuknecht, *Public Spending in the 20th Century* (Cambridge University Press 2000); International Monetary Fund (IMF), including May 2000 *World Economic Outlook* (see especially IMF Table 5.4 page 172); and *OECD Economic Outlook* (December 2010, Annex Table 25). Unfortunately, there are some substantial discrepancies between the Tanzi and Schuknecht (T&S) and latest OECD data for the overlap year of 1996, and the figures should be regarded as illustrative only. The known breaks in 1996, defined as 'OECD - T&S' are: Australia +0.2, Austria +4.4, Belgium -0.3, Canada +1.8, France -0.5, Germany +0.2, Italy -0.2, Ireland -2.9, Japan +0.8, Netherlands +0.1, New Zealand +5.9, Norway -0.7, Spain -0.5, Sweden -1.2, Switzerland -4.1, UK -0.8 and US +4.2. These changes appear to have resulted from the adoption of ESA95 national accounting principles after the T&S data were compiled. They might also reflect the problems T&S faced in picking up the expenditure of lower tiers of government in federal systems, among other factors.

Comment

Table A shows the ratio of general government expenditure to market-price GDP back to 1870. Note the very large rises in the UK and USA since 2000 and how big modern states are by historic standards. However, there are some serious breaks in the data and the footnote is important. The OECD ratio for Britain is higher than the official UK market-price measure because the UK figure excludes expenditure by the European Union (and also taxes paid directly to it) and because public-sector pensions are scored net of contributions, not gross.

Table B: UK general government expenditure in 2009-10 by country and region on a residence basis

	Scaled public spending 2009-10 (£m)	Estimated GDP at basic prices 2009-10 (£m)	Ratio to GDP at basic prices in 2009-10 (%)	Ratio to GDP at basic prices in 2004-05 (%)	Change in basic-price ratio 2004-05 to 2009-10 (%)	Ratio to GDP at market prices in 2009-10 (%)	Proportion employed in public sector in 2010 Q2 (%)
North-East	30,054	41,231	72.9	63.5	9.4	65.5	24.6
North-West	77,962	121,622	64.1	54.1	10.0	57.6	21.9
Yorks & Humber	53,943	88,984	60.6	50.9	9.7	54.4	22.0
East Midlands	43.109	78,872	54.7	45.2	9.5	49.1	18.2
West Midlands	57,117	93,125	61.3	49.5	11.8	55.0	20.5
East	53,395	120,313	44.4	36.2	8.2	39.9	16.4
London	94,818	246,417	38.5	35.3	3.2	34.6	20.9
South-East	78,278	193,873	40.4	33.7	6.7	36.3	16.5
South-West	51,643	97,303	53.1	44.5	8.6	47.7	20.5
England	540,319	1,081,174	50.0	42.5	7.5	44.9	19.8
Scotland	63,744	104,742	60.9	54.5	6.4	54.7	24.8
Wales	35,064	45,468	77.1	66.8	10.3	69.2	26.1
Northern Ireland	23,234	28,860	80.5	70.7	9.8	72.3	29.1
UK	662,360	1,260,811	52.5	45.0	7.5	47.1	20.8

Source: HM Treasury *Public Expenditure Statistical Analysis 2010* and Office for National Statistics News Release 8th December 2010. Note if 'workplace-based' rather than 'residence-based' estimates of regional GDP are employed the ratios in 2009-10 (2004-05) become 48.8% (40.3%) for Eastern England, 35.0% (31.9%) for London and 43.4% (35.9%) for the South-East. This reflects commuting patterns.

Comment

The penultimate column in Table B shows the regional spending ratios calculated using the market-price GDP measure of national output. The main benefit of using market-price GDP is that it allows the spending ratios for the twelve 'Nomenclature of Units for Territorial Statistics' (NUTS1) regions into which Britain is divided officially to be placed in the international perspective employed in Table A, for example. London's spending ratio of 34.6% would be the third lowest in the entire OECD after Korea (28.1%) and Switzerland (33.6%). The South East's spending ratio (36.3%) would then be the fifth lowest OECD figure, after Australia's 35.0%. In contrast, the North East (65.5%), Wales (69.2%) and Northern Ireland (72.3%) all have noticeably higher spending ratios than Denmark (58.9%) which tops the OECD. The 37.7 percentage point difference between the least and most socialised regions within the UK is also greater than the 30.8 percentage points range observed within the OECD area as a whole.

Table C: Ratios of general government cyclically-adjusted financial balances to money GDP at market prices and non-socialised GDP at market prices in 2010 (%)

	Ratio of surplus (+) or deficit (-) to nominal GDP at market prices (%)	Ratio of surplus (+) or deficit (-) to private sector GDP at market prices (%)	Ratio of non-socialised economy to nominal GDP at market prices (%)
Australia	-2.5	-3.8	65.0
Belgium	-1.9	-4.1	46.1
Canada	-3.2	-5.7	56.5
France	-5.4	-12.3	43.8
Germany	-3.0	-5.6	53.2
Greece	-5.4	-10.4	51.7
Italy	-2.1	-4.3	48.6
Ireland	-26.1	-77.0	33.9
Japan	-6.7	-11.3	59.4
Portugal	-6.1	-11.7	52.2
Poland	-7.3	-13.3	54.7
Spain	-5.9	-10.7	54.9
Sweden	1.1	2.4	45.5
Switzerland	-0.1	-0.2	66.4
United Kingdom	-7.2	-14.7	49.0
United States	-8.8	-15.2	57.8
Euro-zone	-4.2	-8.5	49.3
Total OECD	-6.3	-11.4	55.4

Source: *OECD Economic Outlook*, December 2010, Annex Tables 25 & 28, and author's calculations. Note the 2010 figures for Ireland are heavily distorted by the Irish bank bail-out. The OECD forecasts for 2011 would give -5.7%, -10.3% and 55.5% in the three columns, respectively.

Comment

In theory, no sector of the economy, including government, can fund itself. This means that heavily socialised economies have less ability to fund budget deficits from domestic savings than more free-market ones. The December 2010 OECD Economic Outlook figures revealed that Britain had the third largest structural budget deficit to non-socialised GDP ratio of any developed economy apart from the USA and Ireland last year. The Irish figures are heavily distorted, however (see note above). The structural budget deficit attempts to exclude the effects of the business cycle on the government's finances. However, it is a very uncertain calculation.

Table D: Estimated effects on economic growth of increase in public spending since 1960

	Change in public spending burden 1960-'2010' (%)	Estimated impact on annual economic growth (%)	How much higher output would have been in '2010' with 1960 spending levels (%)
Australia	12.2	-1.8	144
Austria	10.1	-1.5	111
Belgium	21.2	-3.2	383
Canada	10.6	-1.6	121
France	19.8	-3.0	338
Germany	13.0	-1.9	156
Italy	19.8	-3.0	338
Ireland	16.6	-2.5	244
Japan	20.0	-3.0	338
Netherlands	14.4	-2.2	197
New Zealand	9.6	-1.4	100
Norway	13.5	-2.0	169
Spain	23.8	-3.6	486
Sweden	24.2	-3.6	495
Switzerland	19.8	-3.0	338
United Kingdom	16.5	-2.5	244
United States	7.5	-1.1	73
Mean	16.0	-2.4	251

Source: Tanzi and Schuknecht (2000) and *OECD Economic Outlook* (June 2010, Annex Table 25). '2010' is average 2006 to 2010.

Comment

Table D shows the estimated effects of the expansion of the size of government since 1960. The spending figures have been break-corrected and the '2010' spending ratio is an average of the five years 2006 to 2010. This is to remove the purely cyclical effects of the recent global recession and avoid over-estimation of the GDP effects. A coefficient of *minus* 0.15 has been used for the adverse government spending effect. The evidence suggests that coefficients of anywhere between *minus* 0.1 and *minus* 0.4 could be justified. The cumulated GDP effect would still be large, even with numbers at the bottom of this range, given the massive rise in government spending ratios over this period.

Table E: UK government spending by function and government receipts in 2010-11

	(£bn)	(%)	Ratio to GDP at factor cost (%)
Total managed expenditure (TME)			
Social Protection	194	(27.9)	15.0
Personal Social Services	32	(4.6)	2.5
Health	122	(17.5)	9.4
Transport	22	(3.2)	1.7
Education	89	(12.8)	6.9
Defence	40	(5.7)	3.1
Debt Interest	44	(6.3)	3.4
Industry, Agriculture and Employment	20	(2.9)	1.5
Public Order and Safety	35	(5.0)	2.7
Housing and Environment	27	(3.9)	2.1
Other	73	(10.5)	5.6
TME	**696**	**(100.0)**	**53.8**
Government Receipts			
Income Tax	150	(27.4)	11.6
National Insurance	99	(18.1)	7.6
Excise Duties	46	(8.4)	3.6
Corporation Tax	43	(7.8)	3.3
VAT	81	(14.8)	6.3
Business Rates	25	(4.6)	1.9
Council Tax	25	(4.6)	1.9
Other	79	(14.4)	6.1
Total Receipts	**548**	**(100.0)**	**42.3**

Source: HM Treasury, *Budget Report*, June 2010. The 53.8% TME ratio is higher than the 53% quoted in the main text because: 1) there was a downwards revision of 0.2% between the June Budget and the November OBR forecasts; and 2) TME includes public corporations.

Comment

Table E reveals how little of public spending is on the two 'primary' functions of defence (3.1% of GDP) and 'law and order' (2.7%). Even including debt interest only brings the primary total to 9.2%. Almost 83% of government spending, and 44.6% of factor-cost GDP, consists of so-called 'secondary' functions, with social protection, personal social services, health and education summing to 62.8% of government spending and 33.8% of factor-cost GDP. However, spending programmes are not homogeneous and effective reform requires estimation of the marginal costs and benefits of individual spending programmes almost on a 'line-item' basis.

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