

# Progressive Taxation: Applying Hayek's Constraint

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EARLY September 2010: the Trades Union Congress (TUC) conference about to begin with party conference sessions to follow. Details of Treasury spending reviews warily expected. Among hotly debated issues: benefit fraud, tax avoidance and tax evasion—the latter distinction generally trammelled. One definition: '[L]egal but artificial use of loopholes for a tax advantage in a way not intended by the law.'<sup>1</sup> How pregnant that short sentence. 'Artificial': any consequence not intended by legislators. Another trammelled distinction: between legislation effected by politicians and common law evolving through impartial adjudication.

Common law has no intensions beyond the resolution of disputed claims; but legislation seeks to direct behaviour. How else is that direction to be effected if not in the detail of legislation? The willy-nilly interpretation of legislation opens a Humpty-Dumpty world of politics; and, if ever articulated afterthoughts were to become a basis for penalties and punishment, diktat would usurp liberty and the rule of law would perish.

The joint condemnation of benefit fraud and tax avoidance obscures a difference: benefit cheats make fraudulent claims upon the earnings of others; tax avoiders use legitimate means to retain gains made by their own efforts. The unwarranted conflation is redolent of an old idea: that 'government is the great fiction through which everybody endeavours to live at the expense of everybody else'.<sup>2</sup>

Proposals for tax reform are inevitably controversial: some individuals are always disadvantaged. Recent squabbles—between economists at the Treasury and those from the Institute of Fiscal Studies—over the distributional impact of 'fiscal consolidation' are a feature of technocratic calculations, which rarely can substitute for thought. That reform should never ameliorate the progressiveness of income taxation creates an imperative that sanctions ever further encroachment upon higher earnings; an imperative that is implicit in exhortation by the f-word. 'Fairness'—an expletive covering the absence of any reasoned explanation.

That social policy can be financed only through progressive taxation is contradicted by the small proportion of revenue that is raised at higher rates. Moreover, income redistribution can be effected with proportional taxation through the direction of tax-based expenditures; and, if there were disproportionate expenditures by upper income groups upon (say) private education and private health services, and a disproportionate take-up of (say) welfare benefits and subsidised services by lower income groups, income inequalities might be considerably lessened.

The natural benchmark in respect of tax legislation is the neutral position of *even* taxation—that is, a single proportional rate upon earned income, which: (a) is likely to gain support across the full income range, even though individuals pay absolutely different amounts; (b) is conducive to an efficient allocation of resources in that proportionality does

not disturb the differential returns of supplying diverse skills and services to the market; (c) permits income redistribution *via* the provision of free public services targeted upon low income groups; and (d) gives the incentive to low income groups to take greater interest in the balance of taxation and free public services.<sup>3</sup>

Against these, support for income redistribution through the application of progressive taxation draws upon a fallacy that is linked to the presumption of diminishing marginal utility of income. For any individual it is plausible that £100 delivers greater utility where it is the full amount, rather than the final tranche of (say) £10,000 weekly earnings; but the conflation of that comparison with comparisons across different individuals has no basis in psychology or any other science. Even if that were not the case, progressive income taxation *per se* lacks any principle to determine the relative burdens of different income groups. Most seriously, however, progressive taxation violates the fundamental principle of equality before the law:

That a majority, merely because it is a majority, should be entitled to apply to a minority a rule which does not apply to itself is an infringement of a principle much more fundamental than democracy itself, a principle on which the justification of democracy rests.<sup>4</sup>

Unconstrained democratic political systems readily effect such discrimination. The sanction of tyranny is the democratic flaw: that of the majority over minorities.

With taxation, a majority of low-income earners is empowered to impose ever-higher progressive rates upon minority categories of high earners; and, by that process, there is a pervasive erosion of economic welfare. The administrative costs of transfers can be very large. Beyond that, the destructive element of progressive taxation is the impact upon incentives and, thereby, upon innovation and economic advance. Progressive tax-

tion penalises uneven flows of income; it tells against more risky investments; it sets an incentive for work done by amateurs; it discourages saving; and it tells against capital accumulation.

More important than the goose and her golden eggs is the diversion of resources to unproductive enterprise: the more complex tax legislation, the greater the gain in diverting resources to tax avoidance. Drawing upon evidence from ancient Rome, medieval China, Dark Age Europe and Renaissance Europe, William Baumol shows how the direction of entrepreneurial activities, innovation and the dissemination of technological advances are determined by institutional incentives.<sup>5</sup> In broadest terms, entrepreneurial initiative is applied to activities that are either economically productive or unproductive. The latter include rent-seeking through the political lobby, tax avoidance and crime. Economic advance is greatest where political processes protect incentives that focus entrepreneurial talent upon wealth creation. Beyond the objection that the redistribution of earned income through progressive taxation is likely to impede wealth creation, there are no guidelines

by which such progression can be made to correspond to a rule which may be said to be the same for all, or which would limit the degree of extra burden on the more wealthy, [and so] it would seem that a generally progressive taxation is in conflict with the principle of equality before the law.<sup>6</sup>

It is sometimes argued that progressive taxation offsets a disproportionate burden of indirect taxes upon low-income households. While this may be true of current tax payments, greater saving at higher income levels merely defers tax liabilities. Even so, the argument sits at the heart of a suggestion from Friedrich Hayek in respect of the manner in which a strictly limited degree of progression might be accommodated and constrained. With the top income tax rate set at the

proportion of national income taken in taxation, those paying that rate would forfeit a disproportionately high share of their income.<sup>7</sup> Such a rule carries advantages: that its implications may be precisely identified by taxpayers at all levels of income; and that it precludes arbitrary tax hikes upon minority income groups.

Illustrations may be readily concocted and those below rest upon the following assumptions. There are two sets of taxpayer: 'the haves' (H) and 'the not-haves' (N) in respective proportions  $p$  and  $(1 - p)$ . Aggregate income ( $y$ ) comprises earnings by H and N in respective proportions  $h$  and  $(1 - h)$ . Respective income distributions are uniform and income tax is levied at two proportional rates. Only the lower rate is applied to N income; it is also applied to H income over the range earned by N, with the higher rate applied thereafter. Revenue from taxation is the sum of revenue from income tax and from a proportional sales tax ( $s$ ) levied upon expenditure (of net income). Hayek's constraint—that the top income tax rate should not exceed total tax revenue as a percentage of income—is applied.

The above characteristics determine a series of tax configurations as detailed in the Appendix to this article, and implications can be drawn for any number of numerical suggestions. In particular, assumptions can be adjusted to accommodate any view of the degree to which a sales tax might fall disproportionately on N:

*Sales tax assumption 1:* the whole of net income received by H and N is spent and incurs sales tax; the sales tax is therefore proportionate to net income.

*Sales tax assumption 2:* the whole of net income received by N is spent and incurs sales tax; but only part of net income received by H is spent with the effect that sales tax paid by H is equal to that paid by N; the sales tax is therefore not proportionate to net income.

Any baseline for inquiry may be set for adjustments to the standard income tax

rate and/or the sales tax rate. Thus, with a standard income tax rate of (say) 25 per cent, with total revenue raised by taxation equal to (say) 40 per cent of national income, and with H comprising (say) 10 per cent of the population and taking (say) 90 per cent of the income, the implied sales tax rate (under sales tax assumption 1) would be 2.7 per cent. By the effect of Hayek's constraint, the higher income tax rate would be no higher than 40 per cent.

If it were decided to raise tax revenue to 45 per cent of national income, either the standard income tax rate or the sales tax rate (or some combination) might be raised. The required rise in the standard tax rate alone would be from 25.0 to 31.3 per cent, thereby raising the percentage of N income taken as tax by 6.2 percentage points (from 27.0 per cent) and the percentage of H income taken as tax by 5.0 percentage points (from 41.4 per cent). Alternatively, the sales tax rate alone could be raised to 3.9 per cent, in which case the corresponding increases would be 0.9 and 5.6 percentage points, respectively. These results are shown in the first two rows of Tables 1 and 2. Thereafter, the 10/90 (population/income) baseline is retained across successive rows as the overall level of taxation is set at higher levels: between 40 and 100 per cent of national income. These levels may be achieved by a higher standard income tax rate (Table 1) or a higher sales tax rate (Table 2) or various combinations of the two (none shown).

The H/N ratio (of the percentages of own income lost to taxation) declines with upward revisions to the standard income tax rate, approaching unity as the standard income tax rate approaches 100 per cent. Alternatively, where change is by upward revisions to the sales tax rate, the H/N ratio first increases (the effect of the greater direct impact of the sales tax upon N expenditures, than the indirect impact of the sales tax in raising the higher income tax rate). The H/N

**Table 1: Raising the tax share by raising the standard income tax rate.**  
**Assumption 1: proportionate incidence of sales tax (all numbers as percentages)**

Population (N); Income (H)	Taxation		Own income taken in tax			Total income taken in tax; Higher income tax rate
	Standard income tax rate	Sales tax rate	N	H	H/N	
90	25.0	2.7	27.0	41.4	1.53	40
90	31.3	2.7	33.2	46.4	1.40	45
90	37.4	2.7	39.1	51.1	1.31	50
90	43.6	2.7	45.1	56.0	1.24	55
90	50.0	2.7	51.4	61.0	1.19	60
90	56.3	2.7	57.5	65.0	1.13	65
90	62.5	2.7	63.5	70.7	1.11	70
90	68.7	2.7	69.6	75.6	1.09	75
90	75.0	2.7	75.7	80.5	1.06	80
90	81.2	2.7	81.7	85.3	1.04	85
90	87.5	2.7	87.8	90.2	1.03	90
90	93.7	2.7	93.9	95.1	1.01	95
90	98.7	2.7	98.7	99.0	1.00	100

**Table 2: Raising the tax burden by raising the sales tax.**  
**Assumption 1: proportionate incidence of sales tax (all numbers as percentages)**

Population (N); Income (H)	Taxation		Own income taken in tax			Total income taken in tax; Higher income tax rate
	Standard income tax rate	Sales tax rate	N	H	H/N	
90	25	2.7	27.0	41.4	1.53	40
90	25	3.9	27.9	47.0	1.68	45
90	25	5.3	29.0	52.5	1.81	50
90	25	6.9	30.2	57.8	1.91	55
90	25	8.8	31.6	63.0	1.99	60
90	25	11.2	33.4	68.4	2.05	65
90	25	14.2	35.7	73.7	2.06	70
90	25	18.2	38.7	79.1	2.04	75
90	25	23.4	42.6	84.2	1.98	80
90	25	30.7	48.0	89.2	1.86	85
90	25	42.0	56.5	95.8	1.70	90
90	25	61.0	70.8	97.7	1.38	95
90	25	89.5	92.1	99.8	1.08	100

ratio reaches a peak of 2.06 as the sales tax rate rises beyond 14 per cent and, thereafter, it declines towards unity as the sales tax rate approaches 100 per cent (as shown in final rows of Table 2).

Tables 3 and 4 represent analogous adjustments, but where the second sales tax assumption is applied, the effect of

which is that H and N incur identical sales tax liabilities. With H paying less sales tax than under Assumption 1, the baselines (first rows) change radically: a sales tax rate of 23 per cent (rather than 2.7 per cent) is required to set total taxation at 40 per cent of income; and the H/N ratio is 1.04 rather than 1.53. If change

**Table 3: Raising the tax share by raising the standard income tax rate.**  
**Assumption 2: disproportionate incidence of sales tax (all numbers as percentages)**

Population (N); Income (H)	Taxation		Own income taken in tax			Total income taken in tax; Higher income tax rate
	Standard income tax rate	Sales tax rate	N	H	H/N	
90	25.0	20	40.0	41.5	1.04	40
90	31.3	20	45.0	46.4	1.03	45
90	37.5	20	50.0	51.2	1.02	50
90	43.7	20	55.0	56.1	1.02	55
90	50.0	20	60.0	61.0	1.02	60
90	56.2	20	65.0	65.8	1.01	65
90	62.5	20	70.0	70.4	1.01	70
90	68.7	20	75.0	75.6	1.01	75
90	75.0	20	80.0	80.5	1.01	80
–	–	–	–	–	–	–
90	95.0	20	96.0	96.1	1.00	96

**Table 4: Raising the tax share by raising the sales tax rate.**  
**Assumption 2: disproportionate incidence of sales tax (all numbers as percentages)**

Population (N); Income (H)	Taxation		Own income taken in tax			Total income taken in tax; Higher income tax rate
	Standard income tax rate	Sales tax rate	N	H	H/N	
90	25	20.0	40.0	41.5	1.04	40
90	25	26.6	45.0	46.9	1.04	45
90	25	33.3	50.0	52.4	1.05	50
90	25	40.0	55.0	58.0	1.05	55
90	25	46.6	60.0	63.4	1.06	60
90	25	53.3	65.0	68.9	1.06	65
90	25	60.0	70.0	74.4	1.06	70
90	25	66.6	75.0	80.0	1.07	75
90	25	73.3	80.0	85.4	1.07	80
–	–	–	–	–	–	–
90	25	87.1	90.3	100.0	1.11	90.3

is driven from that baseline by raising the standard income tax rate (Table 3), the H/N ratio declines towards unity. Alternatively, if that change is driven by increasing the sales tax rate (Table 4), the H/N ratio rises. At the effective limit where all H income is taken as taxation, the sales tax rate sits at 87 per cent and the H/N ratio is 1.11.

For the final series of illustrations, Tables 5, 6 and 7 represent different degrees of inequality between H and N,

beginning with the 10/90 (population/income) baseline and with final rows representing 50/50 equality. To hold revenue from taxation at 40 per cent of national income, either the standard income tax rate (Table 5) or the sales tax rate (Table 6) or various combinations (none shown) might be adjusted. Full equality (final rows) is consistent with either a 38.4 per cent standard income tax rate and 2.7 per cent sales tax rate (Table 5), or a 25.0 per cent standard

**Table 5: Maintaining the tax burden by raising the sales tax.**  
**Assumption 1: proportionate incidence of sales tax (all numbers as percentages)**

Population (N); Income (H)	Taxation		Own income taken in tax			Total income taken in tax; Higher income tax rate
	Standard income tax rate	Sales tax rate	N	H	H/N	
90	25.0	2.7	27.0	41.4	1.53	40
85	30.0	2.7	32.5	41.4	1.27	40
80	33.3	2.7	35.1	41.2	1.17	40
75	35.0	2.7	36.8	41.1	1.12	40
70	36.1	2.7	37.8	40.9	1.08	40
65	36.9	2.7	38.6	40.7	1.05	40
60	37.5	2.7	39.2	40.5	1.03	40
55	38.0	2.7	39.7	40.3	1.02	40
50	38.4	2.7	40.0	40.0	1.00	40

**Table 6: Maintaining the tax burden by raising the standard rate.**  
**Assumption 1: proportionate incidence of sales tax (all numbers as percentages)**

Population (N); Income (H)	Taxation		Own income taken in tax			Total income taken in tax; Higher income tax rate
	Standard income tax rate	Sales tax rate	N	H	H/N	
90	25.0	2.7	27.0	41.4	1.53	40
85	25.0	4.2	28.2	42.0	1.49	40
80	25.0	5.9	29.4	42.7	1.45	40
75	25.0	7.7	30.8	43.1	1.40	40
70	25.0	9.7	32.3	43.4	1.34	40
65	25.0	11.9	33.9	43.3	1.28	40
60	25.0	14.3	35.7	42.9	1.20	40
55	25.0	17.0	37.8	41.9	1.11	40
50	25.0	17.8	40.0	40.0	1.00	40

**Table 7: Maintaining the tax burden.**  
**Assumption 2: disproportionate incidence of sales tax (all numbers as percentages)**

Population (N); Income (H)	Taxation		Own income taken in tax			Total income taken in tax; Higher income tax rate
	Standard income tax rate	Sales tax rate	N	H	H/N	
90	25	20	40.0	41.5	1.04	40
85	25	20	40.0	41.2	1.03	40
80	25	20	40.0	42.8	1.07	40
75	25	20	40.0	43.3	1.08	40
70	25	20	40.0	43.7	1.09	40
65	25	20	40.0	43.7	1.09	40
60	25	20	40.0	43.3	1.08	40
55	25	20	40.0	42.2	1.06	40
50	25	20	40.0	40.0	1.00	40

income tax rate and 17.8 per cent sales tax rate (Table 6). The direct impact (upon tax paid by H) of higher sales tax rates is greater than the indirect impact (upon tax paid by H) of the higher income tax rate, which is the consequence of a rise in the standard income tax rate. Thus, prior to full equality (each final row) the sales tax adjustment maintains the greater inequality between N and H in terms of tax paid as a percentage of income.

In Table 7, the alternative 10/90 (population/income) baseline represents the second sales tax assumption—that is, N and H pay identical sales tax. As income levels converge, sales tax revenue rises (as H expenditure is at ever higher levels) and income tax revenue falls (the higher tax rate applying to ever shorter income ranges). The net effect is zero, so no tax rate adjustments are necessary for taxation to remain at the 40 per cent level. The percentage of N income lost to taxation also remains constant at 40 per cent, as the percentage of own H income paid in taxation first rises and then falls to the point where the distinction between N and H is eliminated.

## Final comments

The above presentations are founded upon a number of dubious propositions that, in a different context, would be open to challenge: that lower income groups incur disproportionate levels of sales tax; that the direction of fiscal expenditures is insufficient to achieve desired levels of income redistribution; and that greater income equality has irrefutable merit. However, these propositions are set aside. Instead, illustrations are presented simply to show the impact of Hayek's simple rule; a rule whose objective is to constrain the potential tyranny of majority decision making within democratic systems. In voting for higher taxation, whether by way of income taxation or indirect taxation upon expenditure, by Hayek's rule a majority is prevented

from isolating itself from the consequences of its decisions.

In the representations of Tables 1, 2, 5 and 6, indirect sales tax is proportional to net income. For given ratios of total taxation to total income, income inequalities are narrower with higher standard rates of income tax than with higher rates of sales tax. In the representations of Tables 3, 4 and 7, indirect sales tax falls disproportionately upon lower net income levels. By that changed assumption, a higher level of sales tax is required for any standard income tax rate to deliver a predetermined ratio of total taxation to total income. With all of these representations of Hayek's rule, it is only by raising one and/or the other of the two tax rates that apply to *both* income groups that the higher rate of income tax can be raised. Yet while no one is exempt from the consequences of higher taxation, any level of income equality can be achieved, if that is the democratic decision.

The economic advances that liberal market economies generate can be argued to afford opportunities to enhance transfers to the less fortunate; but there are dangers of induced moral hazards and work disincentives. In guarding against the latter, placing a limit upon the higher income tax rate is an eminently practical suggestion. That proposed by Hayek incites caution as it is permissive of socialist aims; and it looks for efficiency in resource usage as reflected in the aspiration 'that each should feel that in the aggregate all the collective goods which are applied to him are worth at least as much as the contribution he is required to make'.<sup>8</sup>

## Appendix

There are two sets of taxpayer: 'the haves' (H) and 'the not-haves' (N) in respective proportions  $p$  and  $(1 - p)$ . Aggregate income ( $y$ ) is earned by H and N in the respective proportions  $h$  and  $(1 - h)$ . Income distributions are uniform and

income tax is levied at two proportional rates. Only the lower rate ( $t^N$ ) is applied to N income. That rate is applied to H over the N net income range, with the higher rate ( $t^H$ ) applied thereafter. Revenue from taxation ( $T$ ) is the sum of income tax revenue ( $T^*$ ) and revenue ( $S$ ) from a proportional sales tax ( $s$ ) levied upon the expenditure of all earnings net of income tax. Hayek's constraint—that the top income tax rate ( $t^H$ ) should not exceed total tax revenue as a percentage of income ( $T/y$ ) is applied.

Each individual N pays income tax

$$T^N = t^N y(1-h)/(1-p) \quad (1)$$

so that income tax raised from all N is

$$(1-p)T^N = y(1-h)t^N \quad (2)$$

For H, the lower tax rate ( $t^H$ ) is applied to the first

$$R = p(1-h)/h(1-p) \quad (3)$$

of income; where R is the ratio of N income per head to H income per head. The amount of income tax that is collected from an individual H at that lower rate is

$$T^{H'} = t^N R(yh/p) = t^N y(1-h)/(1-p) \quad (1a)$$

The higher rate ( $t^H$ ) is applied to the rest of H income; the amount of income tax that is collected from an individual at that higher rate is

$$T^{H''} = t^H(1-R)(yh/p) \quad (4)$$

In total, an individual H pays income tax

$$T^H = T^{H'} + T^{H''} \quad (5)$$

$$T^H = t^N R(yh/p) + t^H(1-R)(yh/p) \quad (6)$$

$$T^H = (yh/p)[t^N R + t^H(1-R)] \quad (7)$$

so that income tax raised from all H is

$$pT^H = p(yh/p)[t^N R + t^H(1-R)] \quad (8)$$

$$= yh[t^N R + t^H(1-R)] \quad (9)$$

Total income tax raised is

$$T^* = (1-p)T^N + pT^H \quad (10)$$

## Sales tax assumption 1

In first assuming that all net income is spent and therefore subject to sales tax, revenue from taxation ( $T$ ) is equal to income tax revenue ( $T^*$ ) plus sales tax revenue ( $S$ ):

$$S = s(y - T^*) \quad (11)$$

$$T = T^* + s(y - T^*) \quad (12)$$

$$T = sy + (1-s)T^* \quad (13)$$

$$T = sy + (1-s)\{(1-p)T^N + pT^H\} \quad (14)$$

$$T = sy + (1-s)\{t^N y(1-h) + yh[t^N R + t^H(1-R)]\} \quad (15)$$

$$T = sy + (1-s)y\{t^N(1-h) + h[t^N R + t^H(1-R)]\} \quad (16)$$

Taxation as a proportion of national income is

$$T/y = s + (1-s)\{t^N(1-h) + h[t^N R + t^H(1-R)]\} \quad (17)$$

Hayek's constraint upon the top tax rate ( $t^H$ ) is that it should not exceed

$$t^H = T/y \quad (18)$$

$$t^H = s + (1-s)\{t^N(1-h) + h[t^N R + t^H(1-R)]\} \quad (19)$$

$$t^H - (1-s)ht^H(1-R) = s + \{(1-s)(t^N(1-h) + ht^N R)\} \quad (20)$$

$$t^H\{1 - (1-s)h(1-R)\} = s + (1-s)t^N[1-h+hR] \quad (21)$$

$$t^H = \{s + (1-s)t^N[1-h+hR]\} / \{1 - (1-s)h(1-R)\} \quad (22)$$

$$t^H = \{s + (1-s)t^N[1-h(1-R)]\} / \{1 - (1-s)h(1-R)\} \quad (23)$$

In summary, therefore, total income tax collected from all N is

$$(1-p)T^N = y(1-h)t^N \quad (2)$$

total income tax collected from all H is

$$pT^H = yh[t^N R + t^H(1-R)] \quad (9)$$

and total taxation as a percentage of income (and the top income tax rate) is

$$t^H = \{s + (1-s)t^N[1-h(1-R)]\} / \{1 - (1-s)h(1-R)\} \quad (23)$$



## Sales tax assumption 2

Assumptions can be adjusted to accommodate any view of the degree to which a sales tax might fall disproportionately on N. As a specific example, it is now assumed that expenditure by H incurs sales tax that is limited to the amount paid by N. Then from

$$S = s(y - T^*) \quad (11)$$

we obtain

$$S = s[(1 - h)y - (1 - p)T^N]\{1/(1 - p)\} \quad (11a)$$

$$S = s[(1 - h)y - y(1 - h)t^N]\{1/(1 - p)\} \quad (11b)$$

$$S = sy(1 - h)(1 - t^N)\{1/(1 - p)\} \quad (11c)$$

and with

$$T = T^* + s(y - T^*) \quad (12)$$

we obtain

$$T = T^* + sy(1 - h)(1 - t^N)/(1 - p) \quad (12a)$$

$$T = \{(1 - p)T^N + pT^H\} + sy(1 - h)(1 - t^N)/(1 - p) \quad (12b)$$

$$T = y\{(1 - h)t^N + h[t^NR + t^H(1 - R)]\} + sy(1 - h)(1 - t^N)/(1 - p) \quad (12c)$$

$$T/y = (1 - h)t^N + h[t^NR + t^H(1 - R)] + s(1 - h)(1 - t^N)/(1 - p) \quad (17a)$$

$$t^H = (1 - h)t^N + h[t^NR + t^H(1 - R)] + s(1 - h)(1 - t^N)/(1 - p) \quad (19a)$$

$$t^H - t^Hh(1 - R) = (1 - h)t^N + ht^NR + s(1 - h)(1 - t^N)/(1 - p) \quad (20a)$$

$$t^H[1 - h(1 - R)] = (1 - h)t^N + ht^NR + s(1 - h)(1 - t^N)/(1 - p) \quad (21a)$$

$$t^H = \{(1 - h)t^N + ht^NR + s(1 - h)(1 - t^N)/(1 - p)\} / [1 - h(1 - R)] \quad (23a)$$

While calculations are unchanged for income tax collected from N (2) and H (9), total taxation as a percentage of income (and the top income tax rate) are now calculated using (23a).

## Notes

- 1 'Call for purge of rich tax-dodgers who re poisoning society', *Times*, 13 September 2010, p. 6.
- 2 F. Bastiat, 'The State', *Journal des Débats*, 25 September 1848.
- 3 See F. A. Hayek, *The Constitution of Liberty*, London, Routledge & Kegan Paul, 1960, pp. 315ff.
- 4 Hayek, *Constitution of Liberty*, p. 314.
- 5 W. J. Baumol, 'Entrepreneurship: productive, unproductive and destructive', *Journal of Political Economy*, vol. 98, no. 5, 1990, pp. 893-921.
- 6 F. A. Hayek, *New Studies in Philosophy, Politics, Economics and the History of Ideas*, London, Routledge & Keagan Paul, 1978, p. 142.
- 7 See Hayek, *Constitution of Liberty*, p. 323.
- 8 F. A. Hayek, *Law, Legislation and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy*, Vol. 3, *The Political Order of a Free People*, London, Routledge & Kegan Paul, 1979.