THE CAMEL'S BACK

An International Comparison of Tax Burdens

BARRY BRACEWELL-MILNES

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FOREWORD

Britain is an overtaxed country – true or false? Published statistics give a conflicting message. In 1972 total U.K. taxation, including social security contributions as a proportion of gross national product, came about half-way down a list of OECD countries. Yet, as Dr. Bracewell-Milnes shows in this timely paper, even in that year the U.K. tax burden on earners was high, and on savers intolerably high. Only spenders came off lightly; we tax people too much on what they *put in* to the economy compared with what they *take out*. Since 1972 the tax burden on savers and earners has been increased by higher rates, far tougher rules, and by the insidious effect of inflation. We need look no further to see what is damaging the prosperity and threatening the freedom of the British people.

Dr. Bracewell-Milnes rightly stresses the importance of analysing tax in terms of 'net' rates. An 83 per cent nominal rate means that the Government takes 488 per cent of what is left for the individual. Reducing this rate to 66 per cent gross (194 per cent net) would *double* the take-home pay of the individual while only reducing the revenue derived from that slice of income by one-fifth. One would have to take an extreme view of the elasticities involved not to be convinced that such a reduction might actually *increase* revenue – as well as dramatically stimulating the production of wealth.

Marginal income tax rates above 60 per cent, transfer taxes above about 25 per cent (these are typical top figures for the rest of EEC) are political taxes, imposed not for any good they could possibly confer on the general body of citizens but solely for the punishment they inflict on the payers! If we introduced such rates, dropped any talk of a statutory wealth tax and indexed capital gains to abolish the 5 per cent per annum *de facto* wealth tax, the Budget cost would be negligible even on a 'static' calculation. Such a change would vastly improve our competitiveness, generate new wealth

and probably on balance increase tax revenue.

We have, unfortunately, lost our competitiveness by an insidious process. Successive post-war governments have imposed taxes at intolerable *nominal* rates, but have defended them on the grounds that no-one pays them anyway. Their successors, lacking the courage to reduce the nominal rates have relieved the burden by introducing concessions. Sooner or later along comes a government which says, 'We have had a 90 per cent tax on investment income on the statute book for many years, and it was tacitly approved by our predecessors. Contrary to predictions, the heavens have *not* fallen. All we now propose to do is to enforce the tax by closing the loopholes', – ignoring that the heavens have not fallen precisely because the tax was not enforced. Professor Dahrendorf put his finger on the real problem recently when he said that the British people have subscribed to the myth that the economy is a 'zero sum game'. The man in the street seems to think that one man's gain must perforce be another man's loss and therefore cannot accept that reducing the tax burden on earners and savers would increase output by far more than is needed to finance the actual reliefs, leaving a large surplus to share out amongst the rest of us.

As Dr. Bracewell-Milnes says, 'An enlightened slave-owner is one who treats his slaves with just enough consideration to elicit the maximum monetary return. . . The British taxpayer would indeed be fortunate if the United Kingdom fisc were equally enlightened'.

Imagine a society in which shop floor workers were the only 'citizens' with votes and rights and in which businessmen, managers, doctors, architects and others were treated as 'slaves' whose only role was to serve the citizens. Their personal consumption and satisfaction would be totally ignored in any utilitarian calculation. If the 'citizens' had the political machinery (and the wisdom) to maximize their own self interest they would pay the 'slaves' more and tax them more lightly than they do today.

Most of us realize that the effect of inflation pushing us into higher tax bands, and making investment income now far less secure then earned income, has done more to increase the total tax burden on savers and earners even than the succession of explicit measures in Mr. Healey's Budgets. Governments have resisted pleas for indexation and monetary correction

because unindexed inflation makes it so much easier for the politicians (that special interest group so over-represented in our democracy) to raise revenue without seeming to do so. Dr. Bracewell-Milnes shows that they are doomed to failure. 'If taxes on saving are already confiscatory even without inflation, inflation increases the range over which it is *irrational* to save and *irrational* not to draw savings down'. In a period of inflation taxes on savings come out of the savings themselves — in terms of maintaining an economic balance the interaction of our system of taxation with inflation *increases* rather than *reduces* the demands on the Budget.

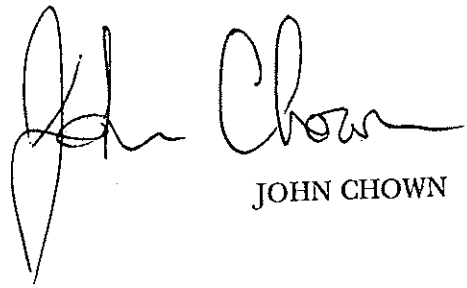
It may be argued that we have been dealing only with the higher paid. But today it costs an employer £18.35 to put an extra £10 into the pocket of an employee over a wide range of earnings beginning at less than half the national average wage. This relationship applies even though the increase may barely take account of inflation and this relationship contributes substantially to the mechanism of inflation itself. Dealing with this is going to be vastly more expensive especially as we start with a public sector borrowing requirement (public expenditure which cannot be financed even at present rates of taxation) of £8 billion. It is going to be politically difficult to reduce the burden on the savers and wealth creators while leaving the unskilled labourer with a marginal tax burden only slightly exceeded by the president of a major United States corporation! We must destroy the myth of the 'zero sum game'. We must destroy the myth that taxes are effectively redistributive and that it is 'the rich' who do, or should, pay for social services.

If we can strip away this idea; if we can convince the ordinary wage earner that it is he himself who finances public expenditure, we will go a long way towards starting a rational discussion on public expenditure and taxation. We should analyse the 'social wage' and say to the public, 'Such and such a public service is worthy, desirable and confers a benefit on the citizen as part of his social wage. However, its cost is 4 pence in the £ on income tax. Would you rather have your social wage in this form, or would you rather have the cash to spend as you wish?' Collective choice through participatory democracy may be a (frequently necessary) second-best to individual choice. It is far better than anything we have today. We need to redress the balance away from 'politician decided' expenditure in favour of 'individual decided' expenditure.

Above all, we need to back away from the gross inequality between the power of the government and the servility of the governed imposed in the spurious and fraudulent name of 'equality'.

To do so we need information and perspective. Dr. Bracewell-Milnes's study provides us with a valuable base from which to begin on the long march to sanity.

I congratulate the Centre for Policy Studies making this study available.



JOHN CHOWN

SUMMARY

(Items asterisked constitute a short summary)

Six different criteria are suggested for the assessment of the tax burden:- liberalism versus socialism; net socialism; competitiveness; neutrality; justice; counterproductiveness. (p.17).

The United Kingdom has a central position within OECD in terms of the relationship between gross national product and total tax revenue including social-security contributions. But this is partly because United Kingdom social-security contributions are relatively low. When social-security contributions are deducted, the United Kingdom moves to the position of a relatively high-tax country (seventh out of 23). (p.22).

Within the EEC, the contrast is both sharper and different. When social-security contributions are included, the United Kingdom is a relatively low-tax country (seventh out of 9). But this is entirely due to the relatively low level of social-security contributions. When social-security contributions are deducted, the United Kingdom is unequivocally a high-tax country. (p. 23).

* The United Kingdom ranking for taxes on capital is the highest in the OECD. The most striking contrast between the United Kingdom and other countries in terms of tax yield (whether as a ratio of gross national product or of total tax yield) is to be seen in the taxation of capital. (pp.24 & 25).

* By comparison with the tax burdens in other OECD countries, spending in the United Kingdom has a relatively easy ride. Earning is treated more severely, and saving is treated more harshly than in any other OECD country. (p.27).

* In terms of international competitiveness, the United Kingdom occupies a relatively unfavourable fiscal position within the OECD. The United Kingdom economy is not so strong at present that it can afford to throw away the advantages obtainable from a more competitive tax structure. (p.27).

The 1972 comparison depicts a generally stable set of relationships. Total taxation and taxation of income and profits have risen similarly in the United Kingdom and elsewhere. Taxes on goods and services have remained within some half a percentage point of the average. Only the change in social-security contributions as a percentage of gross national product has been seriously divergent. (p.29).

The United Kingdom's excises are relatively high and her general consumption taxes relatively low. (p.30).

1972 may be taken as a generally representative year; the United Kingdom has not diverged much from OECD trends over the period 1965-1972, except for the low level and slow growth of social-security contributions. But the United Kingdom went sharply against the trend between 1970 and 1972, which shows how these percentages can be altered by changes of policy. (p.30).

* Within the EEC the relative tax burden on the United Kingdom is increased by a move from the factor-cost to the market-price method of calculating gross domestic product. (p.33).

Differences of classification on the same subject by inter-governmental organizations with a substantial overlap of membership emphasize the dangers of arguing that any one figure or concept has a monopoly of the truth. (p.34).

* *Revenue Statistics* is superior to Economic Trends both for the use of the market-price basis and for the inclusion of taxes on capital. These changes from Economic Trends to *Revenue Statistics* increase the measure of tax take in the United Kingdom relatively to other countries in the EEC, the inclusion of taxes on capital increases the measure of tax take in the United Kingdom relatively to other countries throughout the world. (p.38).

* An index of tax awareness, taking account of differences in the quality or nature of different taxes, suggests why France is generally regarded as a low-tax country, even by Frenchmen, and why the British generally consider themselves to be overtaxed. When allowance is made for tax quality, the United Kingdom is among the most heavily taxed countries in the world. (p.42).

The measure of overtaxation in the United Kingdom would be increased by the inclusion of a factor for relative poverty. (p.42).

By the criteria acceptable to the political left, a tax may be the more *acceptable* because it is painful especially as it *increases* government intervention. The attitude of the right is the opposite: taxes on capital are the more *unacceptable* because they are painful especially as they *increase* government intervention. (p.45).

* In a quantitative comparison of fiscal politics in 15 European countries, the United Kingdom is shown as much the furthest to the political left. (p.46).

* The traditional classification of personal taxes into taxes on income, capital and expenditure is inferior to a classification into taxes on earning, spending and new saving. (p.47).

* The traditional academic consensus on the analysis of personal taxation is in most of its essentials fallacious (p.47).

* A steepening of the gradient of 'progressive' taxation may make the tax structure either more 'progressive' or more proportional. (p.47).

United Kingdom taxes are the most sharply graduated in Europe as well as reaching the highest maximum rates. (p.47).

* It is wrong to argue that the British tax system is roughly proportional because the middle three-quarters is taxed proportionately at the basic rate of income tax and the 'progressiveness' of the taxation at the top is offset by the 'regressiveness' of the taxation at the bottom. The British tax system is the most sharply graduated in Europe, notwithstanding the levying of a proportional income tax over wide ranges of income. (p.47).

* The contentions that the British income tax structure or whole tax system is 'not very progressive' or 'almost proportional' help to create the impression that the British are not heavily taxed. These contentions do not survive analysis. (p.48).

* Traditional analysis, from the side of supply, has been doubly wrong, first, in failing to distinguish between temporary and permanent saving and, second, in suggesting that saving is relatively insensitive to variations in price. (p.49).

* By the criterion of maximum revenue yield, temporary saving should be taxed more heavily than permanent saving; in practice, permanent saving is taxed to the point of total confiscation and beyond, while temporary saving is not taxed at all. (p.49).

* The point of maximum tax yield is to be found at a higher tax rate than the optimum social rate under any other concept of society's best interest than one which identifies the interest of society with the interest of the fisc. (p.50).
* All taxes on permanent saving are anti-social (against the interest of society) inasmuch as the loss to the rest of society exceeds the gain to the fisc. (p.50).
* The fisc exposes itself to increasing risk as tax rates rise: the likelihood of reduction relatively to increase in yield increases. (p.50).
* The United Kingdom, as the country with the highest tax rates, is particularly exposed to the danger that these rates may damage the interest of the fisc as well as the taxpayer. (p.50).
* The probability that the United Kingdom maximum rate of tax on earned income is so high as to reduce the revenue yield is at least 200 per cent worse than for the rest of the EEC and 500 per cent worse than for France. (p.50).

United Kingdom taxes on earning (and saving) can be avoided, not only by working less and spending more, but also by emigration. (p.51).
* The tax on permanent saving rises to more than 100 per cent gross or infinity net. In these circumstances, the yield of tax on new saving must be zero, except in so far as taxpayers behave irrationally; and the return from tax on old saving must be negative so that the maintenance of old saving is irrational except in so far as there are time lags or expectations of policy changes. Any tax on saving at more than 100 per cent gross is thus at best living on borrowed time. (p.51).

This is not the limit of the damage. The tax paid on old savings shows up in the statistics, even at a rate of more than 100 per cent gross; the taxpayer may be unable to adjust his affairs in time, or he may be unable to spend his capital quickly enough, or he may be hoping for a change in fiscal policy or he may be preparing to emigrate. What does not show up in the statistics is the new saving not made or the old saving drawn down as a result of the attempt to levy tax on saving at more than 100 per cent gross. (p.52).
* The fisc as well as the taxpayer would benefit if taxes on saving were reduced to a maximum of total confiscation. (p.52).
* There are a number of separate and cumulative reasons

why the United Kingdom fisc may be expected to lose both absolutely and relatively to other countries, from the present high rates of tax on earning and saving, and to gain from their reduction. The taxpayer's interest in these reductions would parallel that of the fisc. (p.52).

* The United Kingdom fisc is especially exposed to the risk that any given nominal rate of tax will be counterproductive in terms of yield, since the United Kingdom has at present the highest rate of inflation in the OECD outside Iceland. (p.52).

Inflation imposes no additional burden on taxes on earning unless they are graduated: if they are graduated, the additional burden imposed by inflation is heaviest for middle incomes, at the point where the ratio of marginal to average net income is lowest. Inflation imposes an additional burden on taxes on saving whether they are graduated or not: the additional burden is a function of the rate of tax on saving (especially if levied in the form of taxes on income and capital gains) and not a function of tax graduation. (p.53).

* The budgetary cost of cutting taxes on saving is reduced as inflation increases. (p.53).

* United Kingdom taxes are the highest in the EEC or even the OECD, tax by tax as well as in total, taxes on gifts being amalgamated with taxes on bequests and taxes on wealth being amalgamated with taxes on income or transfers. (p.53).

* Harmonization of United Kingdom tax rates with those of the Eight would require a cut of 25.2 per cent in the maximum gross rate of tax on earned income, 31.4 per cent in the rate on investment income and 64.2 per cent (nearly two-thirds) in the gross rate of tax on transfers. These tax cuts would be inexpensive and might more than pay for themselves, not only in terms of resources, but even in terms of yield. (p.54).

When governments are taking about half of national income for public expenditure, the sources and uses of these funds are arguably as important as all other economic questions combined. (p.55).

* The higher the level of tax on permanent saving, the higher, not the lower, the burden of other taxes. (p.55).

The British taxpayer would indeed be fortunate if the fisc treated him as well as an enlightened slave-owner would treat his slave. (p.56).

* The rates of tax that maximize the private interest of the fisc are significantly higher than those that maximize the interest of society as a whole. (p.56).
* There are three separate and cumulative reasons why the treatment of the taxpayer by the United Kingdom fisc compares unfavourably with the treatment of a slave by an enlightened slave-owner. (p.56).

The slave-owner who treats his slaves worse than the level of maximum monetary return is unjust as well as unbusiness-like. Similarly for the United Kingdom fisc. (p.57).
* The calculation of the burden leads to a study of the concepts by which the burden is calculated. The concepts commonly in use at present are substantially fallacious and substantially underestimate the real burden of taxation in the United Kingdom, whether in terms of justice or of economics. (p.57).
* The camel's back is threatened not so much by the weight of United Kingdom taxation as by its structure, which is arguably the least just and least economic of any country in the OECD. (p.57).

THE CAMEL'S BACK

An International Comparison of Tax Burdens

A. Introduction

The idea that Britain is overtaxed is greeted in some quarters with a patronizing smile, as though it were a populist myth, the invariable complaint of taxpayers in all ages and all countries. Why, it is not only in Britain, comes the rejoinder, but throughout the developed world that taxes have been rising in recent years even as a proportion of national income; Britain is not at the top of the tax-take league table; her indirect taxes and 'national insurance' or 'social security' contributions are relatively low; taxpayers are like farmers — you can't stop them grumbling, but they might do better to count their blessings.

It is the purpose of this paper to assess the relative burden of taxation in Britain both absolutely and by comparison with the rest of the developed world. This assessment raises complex conceptual and statistical questions, some of which are examined more fully elsewhere. But it is important not to miss the wood for the trees. The question of whether a country is overtaxed by international standards cannot be answered with a yes or no that is equally appropriate to all aspects and angles: a country may be overtaxed by one criterion and undertaxed by another; but overtaxation is a serious matter, economically, politically and morally, and it is important to be able to discern at least the main lines of the position.

I suggest six principal criteria for the assessment of the tax burden:

(1) ***Liberalism versus socialism.*** This is the traditional and common-sense concept of the tax take as a proportion of national income; the system is relatively liberal if this proportion is low and relatively socialist if it is high.

(2) ***Net socialism.*** This is a variant of (1) that allows for cash payments by the State to private persons as well as cash payments (taxes) by private persons to the State: subsidies are negative taxes. For example, investment grants have been

thought in some quarters to reduce the burden of taxation on industry and 'national insurance' or 'social security' outpayments to reduce the burden of taxation on individuals: so only net payments to the State would count as taxes. In my opinion this is best regarded as a separate and more complex calculation which should not be confused with the calculation of tax take. Indeed, the calculation of the burden on the net basis may not be possible at all; and even if it were possible, it would arguably be less useful than a simple tax-take calculation. A calculation that nets out the tax burden on the whole population leaves much unsaid about the intervention and involvement of the government in the economy. Again, not all public expenditure for the benefit of private persons is received in the form of cash; and the distinction between benefits in cash and benefits in kind is formal rather than substantial. Moreover, when 'benefits' are received in kind, it is arguable how they should be measured or indeed whether they should be counted at all. (Parents are sometimes fined for refusing to send their children to school). But the boundary is not unequivocal even if subsidies are in principle excluded: for example, it is a nice conceptual question whether repayments of selective employment tax to manufacturers were properly regarded as public expenditure or better treated as a repayment of the original tax.[1] The concept of net socialism is not discussed further in this paper.[2]

(3) *Competitiveness.* This appears to be just a technical criterion but really is not. For reasons that I find less than completely persuasive, the international commercial-diplomacy establishment has treated indirect taxes, but not direct taxes, as deductible on exports but imposable on imports. (Indirect taxes are excises, purchase tax, value added tax). It has therefore mattered whether a country relied relatively more on direct taxes (United States) or on indirect taxes (France); France has in this way obtained an international competitive advantage alternative to what might otherwise have been obtained by a depreciation of the franc. So the question is not just technical: changes in the exchange rate are the very stuff of changes in prices and employment. A simple measure of how the tax system affects international competitiveness is suggested below (p.27 & Table 6.)

(4) *Neutrality.* Competitiveness, or neutrality of competition between home and foreign markets, leads to the general

liberal concept of neutrality between competitive activities within a single market: between different forms of spending; between spending and saving; between risk-bearing and security; between work and idleness. Different tax systems may differ violently in their relative treatment of these comparable expenditures or activities, especially at different levels of income or wealth; the usual discriminations constitute incentives to spending, security and idleness and discouragements to saving, risk-bearing and work. The concept of neutrality is in its origin economic (the avoidance of uneconomic activities and thus the avoidance of waste);[3] when there is discrimination not only between rich and poor but also between function and function (poor savers, for example, being taxed more heavily than rich spenders), the system may be criticized on economic grounds as well as on the more subjective grounds of justice.[4]

(5) ***Justice.*** In popular terms, this comprehends both 'social justice' (a term seldom, if ever, defined) and real justice (distribution between citizens by rational criteria concerning the distinctions between rich and poor, saving and spending, risk-bearing and security, work and idleness). Discrimination may be uneconomic as well as unjust: it may impoverish the whole population and not merely the victims. The arguments are not the less persuasive for being necessarily *a priori.*[4]

(6) ***Counter productiveness.*** Governments, like individuals, can be too greedy for their own good. As tax rates increase, revenue yields increase more slowly; eventually, beyond the point of maximum tax yield, revenue actually falls, and it falls to zero at the point where the rate of tax becomes prohibitive. This is recognized *between* nations for taxes on goods: the concept of a prohibitive tariff rate between nations is generally understood. What is unfortunately not generally understood is the concept of a prohibitive tariff *within* nations. It is recognized that tariff increases on trade between nations can be counterproductive simply because they yield less and less revenue as the rate of tax rises further and further beyond the point of maximum yield. What is not similarly recognized is that the same process can occur within countries as between them: an increase in direct taxes, like an increase in tariffs on trade between countries, can not only reduce competitiveness but also be counter productive even in terms of revenue yield.[5]

Section B ('Analysis of the tax burden in 1972') gives the basic comparisons of tax take in 1972 in terms of ratios between various taxes and gross national product for the countries of the OECD.[6] These ratios eliminate both the differences in tax burden due to differences in average income and also the ambiguities of calculation due to changes in exchange rates. Gross national product is the sum of national income, capital consumption and net property income from abroad; gross national product may be taken as a rough indicator of national income, which is much its largest component. The figures of gross national product are much less reliable than the tax figures;[7] the ratios are therefore probably not correct to the last digit shown, but the appropriate rounding and scepticism can be contributed by the reader. Tax take as a proportion of gross national product concerns (1), (3) and (4) of the six criteria on pp.17-19. Section B also compares the taxation of capital with tax take in total as well as with gross national product. (Table 5). This has some bearing on (5) of the six criteria.

Section C ('Convergence and divergence') shows how the ratios have changed over recent years in one country by comparison with another.

Section D ('Market prices and factor cost') explains the concepts of measuring gross domestic product at factor cost and at market prices and shows the relevance of this distinction to a calculation of tax take.

Section E ('Rival offerings') compares and contrasts the foregoing analysis with two series from official sources, one from the EEC and one from the United Kingdom government.

Section F ('Perception of taxes') discusses possible differences in the quality of taxes as perceived by the taxpayer, by contrast with mere differences in their quantity.

Section G ('The tradition and the truth') takes issue with some of the accepted wisdom about tax burdens and their distribution.

Section H ('Maximum tax yield'), which concerns criteria (4) – (6) on pp.17-19, argues that tax rates may be more important than tax take for questions both of economics and of justice between taxpayers.

Section I ('Inflation') makes the adjustments in the argument necessary to allow for the fall in the value of money.

Section J ('Harmonization') shows the implications for the

British tax system of harmonizing our maximum tax rates with the rest of the European Economic Community. This section presents an international comparison of tax rates which is sharply at variance with the international comparison of tax take.

Section K ('A track through the jungle') sums up the argument and points the morals.

B. Analysis of the tax burden in 1972

This section is divided into four parts. Subsection (i) is concerned with the broadest and crudest of the comparisons currently in use, the comparison between total taxation and gross national product. Even this comparison may be made in two different ways – inclusive and exclusive of taxation disguised as 'social-security contributions'.

Subsection (ii) is concerned with the ratios of different taxes to gross national product. For reasons explained in Sections E-H, these ratios may be misleading as criteria both of economics and of justice between taxpayers; similar criticisms inevitably hold good for the crude overall comparisons in subsection (i).

Subsection (iii) is concerned with the ratios of the yields from capital taxes to gross national product and to total tax revenue.

Subsection (iv) is concerned with the question of competitiveness mentioned as item (3) on p.18. A new measure is suggested that is conformable to existing conventions of international commercial diplomacy and statistics, even though these conventions leave something to be desired in terms both of economics and of justice between taxpayers; the necessary qualifications are provided in Sections F-J.

(i) *Taxation and gross national product*

Table 1 shows social-security contributions and total tax revenue including and excluding social-security contributions as percentages of gross national product (GNP) in 1972 for 23 countries of the Organisation for Economic Co-operation and Development. (Figures for the remaining OECD member country, Iceland, are not available). Table 2 reproduces the same information in the form of rankings within OECD and within the European Economic Community (EEC).

TABLE 1

Total tax revenue as percentage of gross national product: 1972 ratios

			Percentages
	(1)	(2)	(3)
Australia	24.28	24.28	—
Austria	37.04	27.59	9.45
Belgium	35.20	24.58	10.63
Canada	33.53	30.61	2.92
Denmark	44.82	41.37	3.41
Finland	35.75	31.01	4.74
France	35.80	21.32	14.48
Germany	35.97	23.84	12.13
Greece	23.71	17.80	5.91
Ireland	31.09	28.26	2.82
Italy	31.07	18.93	12.14
Japan	21.09	16.99	4.10
Luxembourg	37.44	26.60	10.83
Netherlands	41.84	27.11	14.74
New Zealand	29.51	29.51	—
Norway	45.71	33.33	12.38
Portugal	23.38	17.28	6.10
Spain	21.30	12.35	8.95
Sweden	43.89	34.97	8.92
Switzerland	24.12	18.49	5.64
Turkey	20.45	16.84	3.74
United Kingdom	34.73	29.32	5.40
United States	28.06	22.31	5.75

(1) Total tax revenue (including social security) as percentage of GNP
(2) Total tax revenue (excluding social security) as percentage of GNP
(3) Tax revenue from social-security contributions as percentage of GNP
(1) − (2) = (3)
Source: *Revenue Statistics of OECD Member Countries,* Tables 1A, 1B, 4

The United Kingdom has a central position within OECD in terms of the relationship between gross national product and total tax revenue including social-security contributions. (col. (1) in Table 2). But this is partly because United Kingdom social-security contributions are relatively low. (col. (3) in Table 2). When social-security contributions are deducted, the United Kingdom moves to the position of a relatively high-tax country (seventh out of 23; col. (2) in Table 2).

TABLE 2

Total tax revenue as percentage of gross national product: 1972 rankings

	(1)	(2)	(3)	(4)	(5)	(6)
Australia	17	13	—			
Austria	6	9	8			
Belgium	10	12	7	6	6	6
Canada	12	5	20			
Denmark	2	1	19	1	1	8
Finland	9	4	16			
France	8	16	2	5	8	2
Germany	7	14	5	4	7	4
Greece	19	19	12			
Ireland	13	8	21	8	3	9
Italy	14	17	4	9	9	3
Japan	22	21	17			
Luxembourg	5	11	6	3	5	5
Netherlands	4	10	1	2	4	1
New Zealand	15	6	—			
Norway	1	3	3			
Portugal	20	20	11			
Spain	21	23	9			
Sweden	3	2	10			
Switzerland	18	18	14			
Turkey	23	22	18			
United Kingdom	11	7	15	7	2	7
United States	16	15	13			

Source: Table 1. Columns (1) — (3) for the OECD and (4) — (6) for the EEC are taken from cols. (1) — (3) in Table 1.

Within the EEC, the contrast is both sharper and different. When social-security contributions are included, the United Kingdom is a relatively low-tax country (seventh out of 9; col. (4) in Table 2). But this is entirely due to the relatively low level of social-security contributions. (col. (6) in Table 2). When social-security contributions are deducted, the United Kingdom is unequivocally a high-tax country. (col. (5) in Table 2).

(ii) *Taxes and gross national product*

Tables 3 and 4 give information for different categories of taxes corresponding to the information on total tax take in Tables 1 and 2. Taxes are divided into taxes on goods and

TABLE 3

Classified tax revenues as percentages of gross national product: 1972 ratios

	Percentages		
	(1)	(2)	(3)
Australia	7.49	13.10	3.69
Austria	13.68	9.92	4.00
Belgium	11.23	12.29	1.10
Canada	10.90	15.19	4.52
Denmark	16.07	22.06	2.69
Finland	14.34	15.90	0.77
France	12.97	6.09	2.26
Germany	10.33	11.77	1.74
Greece	9.05	3.60	5.15
Ireland	15.29	8.73	4.24
Italy	10.55	6.26	2.11
Japan	4.59	9.23	3.16
Luxembourg	8.50	15.14	2.96
Netherlands	11.18	14.46	1.47
New Zealand	7.57	18.63	6.71
Norway	18.24	13.67	1.41
Portugal	8.99	5.38	2.92
Spain	6.71	4.21	1.43
Sweden	13.20	20.21	1.56
Switzerland	6.34	10.01	2.13
Turkey	9.44	6.36	1.61
United Kingdom	9.95	13.61	5.77
United States	5.41	12.57	4.34

(1) Tax revenue from goods and services as percentage of GNP
(2) Tax revenue from income and profits as percentage of GNP
(3) Other tax revenue as percentage of GNP
(1) + (2) + (3) = (2) in Table 1.
Source: *Revenue Statistics of OECD Member Countries,* Table 4.

services; taxes on income and profits; and other taxes, of which the largest component is taxes on capital. The three columns in Table 3 sum to the second column in Table 1.

Within the OECD the United Kingdom ranking for the ratio of taxes on goods and services to national income is slightly below the median and the ranking for taxes on income and profits a little above. But the ranking for other taxes is very near the top. This is because the United Kingdom ranking for taxes on capital is the highest in the OECD.[8]

TABLE 4

Classified tax revenues as percentages of gross national product: 1972 rankings

	(1)	(2)	(3)	(4)	(5)	(6)
Australia	19	10	8			
Austria	5	15	7			
Belgium	8	12	22	4	5	9
Canada	10	5	4			
Denmark	2	1	12	1	1	4
Finland	4	4	23			
France	7	20	13	3	9	5
Germany	12	13	16	7	6	7
Greece	15	23	3			
Ireland	3	17	6	2	7	2
Italy	11	19	15	6	8	6
Japan	23	16	9			
Luxembourg	17	6	10	9	2	3
Netherlands	9	7	19	5	3	8
New Zealand	18	3	1			
Norway	1	8	21			
Portugal	16	21	11			
Spain	20	22	20			
Sweden	6	2	18			
Switzerland	21	14	14			
Turkey	14	18	17			
United Kingdom	13	9	2	8	4	1
United States	22	11	5			

Source: Table 3. Columns (1) – (3) for the OECD and (4) – (6) for the EEC are taken from columns (1) – (3) in Table 3.

Within the EEC the contrast is again starker. The United Kingdom's taxes on goods and services are low, her taxes on income and profits are near the median and her other taxes, including taxes on capital, are the highest.

(iii) *Taxes on capital*

The most striking contrast between the United Kingdom and other countries in terms of tax yield (whether as a ratio of gross national product or of total tax yield) is to be seen in the taxation of capital. The United Kingdom has the highest ratio in the OECD of capital taxation to gross national product (p.24). But the United Kingdom figure in *Revenue Statistics* includes local rates (p. 39, para. 62) which are

perhaps better classified as a consumption tax (a tax on the use of property). A comparison of capital taxes excluding consumption elements is given for 1969 by the table in *Taxation of Capital on Death: A possible Inheritance Tax in place of Estate Duty* (Cmnd. 4930, 1972), the Inland Revenue Green Paper on Inheritance Taxation. This is reproduced as Table 5. The table compares the yield of death duties in the United Kingdom in 1969 with the yields of comparable taxes in 13 other countries, gift taxes being included throughout. The comparison is made on a number of different bases: the position of the United Kingdom is always high and generally extreme. The Inland Revenue themselves say in para. 32: 'It will be seen that whichever of the measures is taken the yield in this country is proportionately greater than in almost any other country.' The contrast is sharpened by the inclusion of wealth tax and income tax: the maximum rate of income tax

TABLE 5

Comparative yield of death duties in United Kingdom and other countries for 1969

	Death duties as percentage of:					
	Total taxes		Total taxes and Social Security contributions		Direct taxes	GNP
	Central and local government	Central government	Central and local government	Central government	Central government	
United Kingdom	2.5	2.8	2.2	2.5	5.9	0.82
Belgium	1.4	1.5	1.0	1.0	3.5	0.34
France	0.9	1.0	0.5	0.6	3.6	0.20
Germany	0.3	0.3	0.2	0.2	0.7	0.07
Italy	1.1	1.2	0.7	0.7	4.2	0.22
Luxembourg	0.8	1.0	0.6	0.7	1.8	0.19
Netherlands	1.0	1.0	0.6	0.6	1.7	0.25
Denmark		0.8		0.7	1.9	0.19
Norway	0.2		0.2			0.08
Ireland*	2.2	2.5	2.0	2.3	7.1	0.59
United States	1.8†	2.3	1.5†	1.7	2.6	0.48†
Australia*	3.2†	1.3	3.2†	1.3	2.0	0.59†
New Zealand	2.0	2.2	2.0	2.2	3.2	0.67
South Africa*		1.2		1.2	1.8	0.14

Death duties include gift taxes which are small for most countries but substantial for the Netherlands.
† Including State death duties. * 1968 figures.
Source: *Taxation of Capital on Death* (Cmnd. 4930), Table 11.

alone is a higher proportion of income in the United Kingdom than the combined maxima of income tax and wealth tax elsewhere.

(iv) *Competitiveness*

Tables 1 and 2 suggest that the United Kingdom is not unusually socialist in terms of total tax take (criterion (1) p.17), although the United Kingdom's exceptional budgetary profligacy would produce a different picture if gross national product were compared, not with tax revenue, but with public expenditure. Tables 3 and 4 show the contrast between the yield from taxes on spending in the United Kingdom and the yield from taxes on earning and saving (criteria (4) and (5), p.17). Spending has a relatively easy ride. Earning is treated more severely, and saving is treated more harshly than in any other OECD country (Tables 3, 4, 5 and p.24). Counter-productiveness (criterion (6) on p.19) is discussed in Section H below. It remains to consider competitiveness (criterion (3)).

Table 6 shows tax revenue including social security contributions but minus tax revenue from goods and services as a ratio of gross national product for 1972. The underlying logic is that taxes on goods and services are generally remitted on exports and charged on imports, whereas social security contributions and taxes on income and profits and other taxes are not. At any given rate of exchange, therefore, a country that takes a larger proportion of its gross national product in social security contributions and taxes other than taxes on goods and services is at a competitive disadvantage by comparison with countries that take a smaller proportion. In this comparison the United Kingdom occupies the median position within the EEC and a relatively unfavourable position within the OECD. Although other elements of international competitiveness may be equally or more important, the United Kingdom economy is not so strong at present that it can afford to throw away the advantages obtainable from a more competitive tax structure.

C. Convergence and divergence

Convergence and *divergence* are technical terms used in the paper *Recent and Prospective Trends in Tax Levels and Tax Structures*[9] by the Head of the OECD Taxation Division,

Ken Messere, to whom most of the credit is due for the notable advance represented by *Revenue Statistics*.

Convergence is defined as countries with high tax-to-GNP ratios in 1965 increasing less than average between 1965 and 1972 and those with low tax-to-GNP ratios increasing more than average. *Divergence* occurs when the contrary holds. The two concepts indicate whether the relative situation in 1972 differed from 1965 and, if so, how far and in which direction.[10] For the OECD in general, the comparison of 1965 and 1972 gives much the same results as the comparison of 1965 and 1971,[11] which suggests that 1972 was not an untypical year.

TABLE 6

Tax revenue including social security contributions but excluding tax revenue from goods and services as percentage of gross national product for 1972

	Percentages (1) and rankings (2) and (3)		
	(1)	(2)	(3)
Australia	16.79	17	
Austria	23.36	9	
Belgium	23.97	8	6
Canada	22.63	12	
Denmark	28.75	4	3
Finland	21.41	14	
France	22.83	10	7
Germany	25.64	6	4
Greece	14.66	20	
Ireland	15.80	19	9
Italy	20.52	15	8
Japan	16.50	18	
Luxembourg	28.94	3	2
Netherlands	30.66	2	1
New Zealand	21.94	13	
Norway	27.47	5	
Portugal	14.39	22	
Spain	14.59	21	
Sweden	30.69	1	
Switzerland	17.78	16	
Turkey	11.01	23	
United Kingdom	24.78	7	5
United States	22.65	11	

Source: Tables 1 and 3.

Convergence and divergence therefore show the trend over the period for which the basic figures exist.

The ratio of taxation to gross national product including social-security contributions (Table 1 column (1) above) rose between 1965 and 1972 in all OECD countries except France by an average of 4.86 percentage points, from 27.30 to 32.16. The United Kingdom at 30.61 was above average in 1965 and the increase was below average (4.12 percentage points); the change was therefore convergent.

For social security contributions as a percentage of gross national product (Table 1), the movement was upward throughout the OECD (an average of 1.83 percentage points, from 6.04 to 7.87). The United Kingdom moved divergently: the percentage was already low (4.71) in 1965 and it increased by only 0.69 points to 5.40.

The percentage of gross national product taken in taxes on goods and services (Table 3) rose between 1965 and 1972 in 13 OECD countries and fell in 10, including the United Kingdom. The average rose by 0.68 points, from 9.84 to 10.52. The United Kingdom moved convergently, from 10.12 to 9.95.[10]

For taxes on income and profits as a percentage of gross national product (Table 3), the movement was again upward throughout the OECD (an average of 2.27 percentage points, from 9.40 to 11.67). The United Kingdom movement was slightly divergent, from 11.27 to 13.61.

The purpose of the figures in Table 7 is to show whether the relative position of the United Kingdom is changing or stable. The figures suggest that the 1972 comparison depicts a generally stable set of relationships. Total taxation and taxation of income and profits have risen similarly in the United Kingdom and elsewhere. Taxes on goods and services have remained within some half a percentage point of the average. Only the change in social security contributions as a percentage of gross national product has been seriously divergent.

However, the comparison between 1965 and 1972 conceals the fact that United Kingdom taxes other than social security contributions reached their maximum percentage of gross national product in 1970, when a Conservative administration came into power with a policy of cutting taxes. The percentage of gross national product taken in taxes on goods

TABLE 7

Convergence and divergence 1965-1972

Percentages

		1965 UK	1965 OECD	1972 UK	1972 OECD	1972 minus 1965 UK	1965 OECD
(1)	Taxation as a percentage of GNP	30.61	27.30	34.73	32.16	4.12	4.86
(2)	Social-security contributions as a percentage of GNP	4.71	6.04	5.40	7.87	0.69	1.83
(3)	Taxes on goods and services as a percentage of GNP	10.12	9.84	9.95	10.52	−0.17	0.68
(4)	Taxes on income and profits as a percentage of GNP	11.27	9.40	13.61	11.67	2.34	2.27

Movement of the United Kingdom: (1) convergent
(2) divergent
(3) convergent
(4) divergent

Source: *Recent and Prospective Trends* and Tables 1 and 3.

and services fell from 10.94 in 1970 to 9.95 in 1972; the percentage taken in taxes on income and profits fell from 15.32 to 13.61; and taxation in total fell from 38.04 to 34.73. These reductions were against the general trend in the OECD.

The figures also conceal substantial differences within the taxation of goods and services. Although the ratio of these taxes in total to gross national product is comparable with the ratios in other OECD countries, the United Kingdom's excises are relatively high and her general consumption taxes relatively low; and this pattern has persisted over the period.

In sum, 1972 may be taken as a generally representative year; the United Kingdom has not diverged much from OECD trends over the period 1965-1972, except for the low level and slow growth of social security contributions. But the United Kingdom went sharply against the trend between 1970 and 1972, which shows how these percentages can be altered by changes of policy.

D. Market prices and factor cost

This section is slightly more technical than the rest of the

paper, and some readers may wish to read only the conclusion in its final paragraph.

Tax take is a ratio of revenue yield to gross national product or national income. But gross national product can be measured in two different ways, at market prices or at factor cost. GNP at market prices exceeds GNP at factor cost by the sum of taxes on goods and services net of subsidies on goods and services. Aggregate taxes on goods and services exceed subsidies on goods and services in all OECD countries and are generally a substantial multiple of these subsidies. In general, therefore, GNP at market prices exceeds GNP at factor cost by a large proportion of the revenue from taxes on goods and services.

The logic of the two concepts is that gross domestic product at market prices is the sum of expenditure and gross domestic product at factor cost is the sum of income. Net property income from abroad is unaffected by the difference between the two concepts and is added to both measures of gross domestic product to give gross national product. Since gross domestic product is in principle calculable equivalently either from income or expenditure, the difference between the two concepts represents a difference in the value of the monetary units: the income pounds are more valuable than the expenditure pounds because they exclude taxes (net of subsidies) on the expenditure. But the adjustment can be made in either direction. National expenditure can also be calculated at factor cost and national income at market prices; expenditure pounds are then more valuable than income pounds.

The difference between gross domestic product (or gross national product) at market prices and at factor cost is called the *adjustment to factor cost.* It is a substantial proportion of the other magnitudes. For example, in 1972 gross domestic product was £62,787 m. at market prices and £54,679 m. at factor cost. The difference of £8,108 m. is 12.9 per cent of GDP at market prices and 14.8 per cent of GDP at factor cost.[12]

The United Kingdom national-income figures use the factor-cost method.[13] The OECD *Revenue Statistics* use the market-price method.[14] The United Kingdom figures in *Revenue Statistics* are on the market-price basis. So we now consider how international comparisons are affected by the

use of one basis rather than the other.

The difference between the two methods is shown by a simple model of an economy in which there are no imports or exports, no costs of tax administration, no incentive effects of taxation on output, and no growth, new saving or net investment (income equals spending). All goods and services are always produced in the same quantities and distributed in the same quantities to each citizen (the pattern of distribution between citizens remains unchanged). A general tax on goods and services is now introduced at 100 per cent; in other words, half the retail price is tax. The proceeds of the tax are returned to the citizens in cash or in kind, in such a way that everyone has exactly the same consumption of goods and services as before.

1. Suppose that the tax is fully shifted forward on to prices. Then

(a) market prices double;

(b) gross domestic product at current market prices doubles;

(c) gross domestic product at constant market prices (deflated market prices) remains the same;

(d) gross domestic product at factor cost remains the same in terms of current market prices;

(e) gross domestic product at factor cost halves in terms of constant market prices.

2. Suppose that the tax is borne entirely by the factors of production. Then

(a) market prices remain the same;

(b) gross domestic product at current market prices remains the same

(c) gross domestic product at constant market prices remains the same

(d) gross domestic product at factor cost halves in terms of current market prices;

(e) gross domestic product at factor cost halves in terms of constant market prices.

This comparison indicates that the market-price method is superior to the factor-cost method in the calculation of tax take. Gross domestic product at current market prices rises only in so far as prices rise. Gross domestic product at factor cost, on the other hand, remains the same only when prices double. Moreover, tax take is 100 per cent of factor-cost gross domestic product and could be more than 100 per cent if the

tax rate were more than 100 per cent, so that the factor-cost method is not suitable for a cake-and-slice analysis. Finally, the 100 per cent tax on expenditure could be replaced equivalently with a 50 per cent tax on income (which is 100 per cent of the income net of tax). This need be no more than a a formal change, and it need have no effect on market-price calculations of gross domestic product; but gross domestic product at factor cost doubles in 1(d) instead of remaining unchanged and remains the same in 1(e) and 2(d) and (e) instead of halving.

By comparison with the factor-cost method, the market-price method reduces the measure of tax take, since it increases the measure of gross domestic product. The larger the proportion of taxes on goods and services, the larger this reduction in tax take and the larger the increase in ranking from high-tax to low-tax. For comparisons of total tax take, including direct as well as indirect taxes, reversals of order are possible, the higher-tax country on the factor-cost basis becoming the lower-tax country on the market-price basis and *vice versa.* For comparisons of indirect taxes only, such reversals of order are not possible, although changes from one basis to another will still change the ratios of burdens between countries: the country with high indirect taxes is relatively more heavily taxed than the country with low indirect taxes on the factor-cost basis and relatively more lightly taxed on the market-price basis. For any given ratio of indirect tax to gross domestic product, whether at factor cost or market prices, all measures of tax take, whether of indirect taxation, direct taxation, total taxation or individual taxes, are increased in the same proportion by a change from market prices to factor cost and reduced in the same proportion by a change from factor cost to market prices; the higher the ratio of indirect tax to gross domestic product, whether at factor cost or market prices, the larger the proportionate change.

Within the OECD, the United Kingdom was in 1972 only one position below the median (the middle rank) for the relationship between taxes on goods and services and gross national product. (Table 4). But within the EEC the percentage of gross national product taken in taxes on goods and services was exceptionally low. (Table 4). So if the tax burden in the United Kingdom is computed by the market-price method of calculating GDP (used by the OECD) instead of the factor-cost

method (used by the United Kingdom), the tax burden on the United Kingdom rises by comparison with the tax burdens on her partners in the rest of the EEC.

E. Rival offerings

Two other series require mention here. The first is contained in the EEC yearly publication *Tax Statistics;* the second is contained in the United Kingdom monthly government publication Economic Trends.

Tax Statistics, of which the 1973 edition included for the first time figures about the United Kingdom (for 1972), gives a detailed breakdown of member countries' tax revenues which is not obtainable elsewhere in a form that purports to compare like with like. Non-member countries are not covered. The information is provided in the form of tax revenues and tax structures (proportions of total tax revenue) not of tax levels (proportions of gross national product), although the reader can calculate the latter for himself. Taxes are classified into: I. Taxes linked to production and imports; II. Current taxes on income and wealth; III. Capital taxes (other than current taxes on wealth); IV. Actual social welfare contributions. These categories are subdivided between: I. Central government; II. Local government: III. Social security funds; IV. Institutions of the European Communities. The classification of taxes differs materially from the OECD classification, notably through dispensing with a 'remainder' category (which must have required a considerable effort of will) and through including recurrent wealth taxes under taxes on income. These differences of classification on the same subject by inter-governmental organizations with a substantial overlap of membership emphasize the dangers of arguing that any one figure or concept has a monopoly of the truth. The fact that this paper follows the OECD approach does not mean that it is preferred to the EEC approach in such matters of dispute, but merely that our subject is comparisons within the OECD whereas the EEC provide figures only for EEC member countries. For this reason the EEC material is not discussed further in this paper.

An 'International comparison of taxes and social security contributions' has been published in Economic Trends since May 1969; the first article covering 1972 was published in the issue of October 1974. This analysis is based on *National*

Accounts of OECD Countries whereas Tables 1-4 are based on *Revenue Statistics of OECD Member Countries;* indeed, the latter publication had not seen the light in 1969, the 1965-1971 volume being published only in October 1973.

The production of *Revenue Statistics of OECD Member Countries* was a substantial piece of staff work within the OECD. Before 1973 the information it contained was not known outside the OECD, if at all. The 1972 figures in the Economic Trends series were still based on the same OECD figures as were available before the publication of *Revenue Statistics.*

The original Economic Trends series, published in May 1969, was based on the OECD's *A Standardised System of National Accounts* (SSNA) (1958 edition) modified to suit United Kingdom requirements. The OECD have themselves made use of the United Nations' *A System of National Accounts* (SNA) (1968 edition),[15] which has superseded the SSNA (or *former SSNA*). The 1968 SNA (or *present SNA*) is itself being replaced from 1974 onwards by the *new SNA;* few countries are yet in a position to supply data according to the new SNA for a period of more than three or four years.[16] Present SNA and new SNA are compared briefly in Economic Trends October 1974; a notable difference is that taxes on capital gains, which were excluded from the present SNA, are now included in the new SNA. But the OECD's *Revenue Statistics* uses a classification of their own:[17] for example, motor vehicle duties paid by households are excluded from the present SNA, included in the new SNA as a direct tax and included by the OECD under taxes on goods and services.[18]

Here we are concerned only with differences between the Economic Trends series and the OECD *Revenue Statistics* series. The three principal differences are:-

(a) Economic Trends is based on gross national product at factor cost; *Revenue Statistics* is based on gross national product at market prices. (Section D above).

We have already noted that the market-price method is more logical than the factor-cost method, that it reduces the absolute level of the tax take by comparison with the factor-cost method and that it increases the relative level of the tax take for a country like the United Kingdom with a relatively low ratio of taxes on goods and services to gross national product.

(b) Economic Trends excludes taxes on capital gains and other capital taxes; *Revenue Statistics* includes capital gains taxes under taxes on income and profits and other capital taxes under taxes on capital.

In my opinion, both Economic Trends and *Revenue Statistics* are wrong; and Economic Trends is more wrong than *Revenue Statistics*. It is wrong to exclude capital taxes from tax-take figures merely because the taxable base is not part of the national income; in a consistent system, income is the only source from which taxes on capital can be paid. And it is wrong to classify taxes on capital gains under taxes on income and profits; capital gains tax is not the most similar tax to income tax, but the most dissimilar.[19]

(c) Economic Trends classifies stamp duties on the transfer of assets as taxes on expenditure; *Revenue Statistics* classifies them as taxes on capital.

Here *Revenue Statistics* would seem to be right and Economic Trends wrong.

TABLE 8

Taxes including social security contributions as percentage of gross national product in 1965

	(1)	(2)	(3)	(4)
Austria	40.8	3	34.30	3
Belgium	32.5	10	30.03	9
Canada	31.9	11	27.33	11
Denmark	33.8	7	30.90	7
France	45.2	1	36.05	2
Germany	39.4	4	32.65	6
Italy	33.3	9	28.95	10
Japan	21.4	14	18.68	14
Netherlands	37.2	6	34.29	4
Norway	39.2	5	33.80	5
Sweden	42.3	2	36.10	1
Switzerland	24.9	13	21.01	13
United Kingdom	33.8	7	30.61	8
United States	29.7(5)	12	24.88	12

(1) Percentage, as shown in Economic Trends
(2) Ranking from (1)
(3) Percentage, as shown in *Revenue Statistics*
(4) Ranking from (3)
(5) Including estate and gift taxes

Table 8 shows taxes including social security contributions as proportions of gross national product in 1965 as given by Economic Trends and *Revenue Statistics*. The changes in order are not dramatic; no country gains or loses more than two places. But the changes in the percentages are larger than the changes in rankings might suggest: France falls 9.2 percentage points, or 20.4 per cent; Belgium falls only 2.5 percentage points, or 7.7 per cent.

TABLE 9

Taxes including social-security contributions as percentage of gross national product in 1972

	(1)	(2)	(3)	(4)
Canada	37.3	6	33.53	6
France	39.8	4	35.80	4
Netherlands	47.7	3	41.84	3
Norway	54.0	1	45.71	1
Sweden	50.5	2	43.89	2
United Kingdom	38.7	5	34.73	5
United States	32.0	7	28.06	7

(1) Percentage, as shown in Economic Trends
(2) Ranking from (1)
(3) Percentage, as shown in *Revenue Statistics*
(4) Ranking from (3)

Table 9, calculated on the new SNA, shows a similar pattern for 1972. The rankings are now unchanged; but the falls range from 8.3 percentage points (Norway) to 3.8 percentage points (Canada).

Table 10 shows taxes on expenditure (Economic Trends) and taxes on goods and services (*Revenue Statistics*) as percentages of gross national product in 1972. The Economic Trends figures are on the earlier SNA basis. Here the United Kingdom, which is shown as a relatively high-tax country in Economic Trends is shown as a relatively low-tax country in *Revenue Statistics*. Belgium, France, Germany and Italy, which are low-tax countries relatively to the United Kingdom in Economic Trends are high-tax countries in *Revenue Statistics*. This cannot be due to the difference between factor cost and market prices: a move from one of these bases to the other cannot change the order of countries in ratio of taxes on

TABLE 10

Taxes on expenditure/taxes on goods and services as percentage of gross national product in 1972

	(1)	(2)	(3)	(4)
Austria	19.1	2	13.68	2
Belgium	13.4	6	11.23	4
Denmark	20.3	1	16.07	1
France	16.8	4	12.97	3
Germany	15.5	5	10.33	6
Italy	12.7	7	10.55	5
Japan	7.6	9	4.59	9
United Kingdom	16.9	3	9.95	7
United States	10.5	8	5.41	8

(1) Percentage, as shown in Economic Trends
(2) Ranking from (1)
(3) Percentage, as shown in *Revenue Statistics*
(4) Ranking from (3)

expenditure to gross national product. The difference may have something to do with the difference between the present (former, old) SNA (column (1) of Table 10) and the new SNA, since in a comparison of a different but overlapping sample of countries on the new SNA basis Economic Trends shows the United Kingdom as fourth (equal) out of seven (as compared with sixth out of the same seven countries in *Revenue Statistics*). But the principal reason for the reversals of order in Table 10 is the difference between the SNA basis of Economic Trends in column (1) and the new OECD basis of column (3),[18] a difference notably illustrated by the comparison of columns (1) and (3) for the United States. Thus Table 10 is a good illustration of the divergences between statistics purporting to report the same transactions, subject only to technical qualifications on matters of detail.

In conclusion, *Revenue Statistics* is superior to Economic Trends both for the use of the market-price basis of calculating gross domestic product and for the inclusion of taxes on capital. So if *Revenue Statistics* rather than Economic Trends is used for the calculation of tax take, there are two consequences for the relative position of the United Kingdom. First, since by EEC standards, the United Kingdom is a low-tax country in terms of taxes on goods and services (column

(4) in Table 4), the measure of the tax take in the United Kingdom rises by comparison with the rest of the EEC. Second, since United Kingdom taxes on capital are heavier than in any other country (p.25), the inclusion of taxes on capital increases the measure of tax take in the United Kingdom by comparison with other countries throughout the world.

F. Perception of taxes

So far, the burden of tax has been discussed in terms of the ratio of taxation, in total or in particular, to gross national product. There are at least three other indicators which have been recommended in different quarters. The first is an index that takes account of relative incomes. The second is an index that takes account of tax awareness. The third is an index that takes account of fiscal politics.

First, relative incomes. Consider a tax like the United States federal income tax which is levied at per-dollar graduated rates on individuals in States with widely differing average incomes. Tax takes are unequal: the richest States pay the largest proportion of aggregate income in tax, because the highest incomes attract the highest tax rates. But if tax takes were to be equal, this means that the poorest States would have to be taxed the most heavily at any given absolute level of income: the same income would have to be taxed more heavily in a poor State than in a rich State. So the measurement of the tax burden is ambivalent between these two opposite interpretations: tax as a proportion of total income and tax as a proportion of any given income. The problem is structurally the same for countries or counties within the United Kingdom, and similarly elsewhere for subdivisions of States levying taxes at national level.

This paradox creates unnecessary difficulties by confusing two different questions: relative income and tax take. If any two areas differ in average income, it is possible to argue that the tax burden in the wealthier is less provided that at any given level of income the proportionate (average) tax take is less. But this condition is compatible with the confiscation (taxation at virtually 100 per cent) of a wide range of marginal income in the wealthier area and with a much higher ratio of taxation to national income in the wealthier area than in the poorer. For example, suppose that there are two States, A

and B, each with a population of 5; that the distribution of income in A is 10, 20, 30, 40, 50 and in B 20, 30, 40, 50, 60; and that income tax in A is levied at 20 per cent on the first 20 and at marginal rates of 30 per cent up to 30, 40 per cent up to 40 and 50 per cent up to 50. Then tax in A is 40 on an income of 150, a tax take of 26.67 per cent. If the tax schedule were the same in B, with a marginal rate of 60 per cent between 50 and 60, tax in B would be 60 on an income of 200, a tax take of 30 per cent. But suppose that B has an exemption for the first 2.5 of income, the structure being thereafter as in A. Then each income in B is better off by half a unit than its counterpart in A, although the tax take, at 28.75 per cent, is still more than 2 points higher than in A. Suppose further that the marginal rate between 50 and 60 is raised to 90 per cent. Then by comparison with the situation in which B's tax schedule was the same as A's, B's tax take *rises* (from 30 per cent to 30.25 per cent) although all B's taxpayers have become 'better off' than A's. Similarly, a graduated tax schedule that is absolutely the same for all (like the United States Federal income tax) imposes the same *absolute* burden on equal incomes in richer and poorer areas; but it imposes a lower *relative* burden on the poorer areas (a lower burden relatively to average income). In other words, if the income distributions are the same, the same tax take and the same relative burden in richer and poorer areas would be obtained by shortening the tranches of the graduated schedule in the poorer area (or lengthening them in the richer area) in accordance with the ratio between the two average incomes. If the income tax were proportional and not graduated, the paradox would disappear: tax burden would be the same irrespective of differences within or between areas. So the difference between relative-income differences and absolute-income differences in this comparison is seen to depend on the wholly subjective phenomenon of tax graduation.

An equally useless criterion is provided by the concept of subsistence. It is indeed conformable to common sense that a given rate of tax is more onerous if levied at and below the level of subsistence than if levied only above this level. The difficulty is that no one has ever been able to identify subsistence for this purpose: if subsistence increases with the average standard of living, the concept is destroyed, and we are back to the paradox of paras. 2 & 3 of Section F.

Second, the perception of taxes or tax awareness. This is the principal subject of the present section. Not all taxes need be equally painful or equally visible per unit of yield to the fisc. Painfulness and visibility may not coincide (a tax might be clearly visible and yet accepted as just or economic); but for present purposes it is not necessary to distinguish between these two qualities. Taxes are taken to be painful and unacceptable in so far as they are perceived.

There are two separate questions at issue, differences between taxes and differences between modes of collection. Income tax, for example, may be collected by withholding at source or from individuals afterwards: the former is much less visible than the latter. General taxes on goods and services, by contrast, are of their nature invisible, being elements in the cost of living neutral between one product and another.

A tax that is relatively difficult to discern may be judged a good tax for this reason (because it is relatively painless) or a bad tax (because it helps the government to fool the people and reduces taxpayer resistance to the government). This difference of assessment is possible within taxes as well as between them. And assessment may depend on appraisal of the taxes concerned: the same person may prefer a general consumption tax to other forms of taxation and yet prefer an income tax that is not deducted at source; a general consumption tax is more neutral and arguably fairer than other forms of taxation, whereas no comparable virtues in the income tax offset the weakening of taxpayer resistance through deduction at source.

The phrase 'index of tax awareness' is taken from a paper by Tanzi[20] who calculated an index for seven countries from the sum of income taxes, property taxes (rates) and excise duties. The reason for including the latter is that many people are aware of the taxes on drink, tobacco and petrol, partly because these taxes are heavy and partly because they are discriminatory. To these taxes I would add taxes on the ownership and transfer of wealth as perhaps the most visible and painful of all, since they are levied on taxpayers individually, on the basis of arbitrary and subjective valuation, and often at a time of bereavement.

Table 11 shows an index of tax awareness calculated from excise duties, income taxes, property taxes and other taxes on capital for 16 OECD countries in 1972. The taxes omitted are

general consumption taxes and social-security contributions, the former being only dimly perceived because they are relatively low and broadly-based and the latter because of the illusion that they are insurance contributions rather than taxes. Excise duties include customs duties because the tax on tobacco, for example, is counted as an excise duty in Denmark and Sweden but as a customs duty in the United Kingdom; general customs duties resemble a general consumption tax rather than discriminatory excise duties, but the results are little distorted by their inclusion. The basic data in Table 11 are taken from Table 1 in Messere's paper *Recent and Prospective Trends.*

By comparison with Table 1, France moves down nine places, Australia moves up seven places and the United Kingdom, Canada and Ireland move up six places. The average displacement is four and a half or rather more than a quarter of the 16 places in total.

Table 11 suggests why France is generally regarded as a low-tax country, even by Frenchmen. It also suggests why the British generally consider themselves to be overtaxed. With the exceptions of Denmark and Sweden, to which we return in a moment, the United Kingdom is the most heavily taxed of the countries in Table 11.

The United Kingdom is also one of the poorest. For reasons already explained I consider this criterion irrelevant to an international calculation of tax take. But others may disagree and say that the degree of overtaxation in the United Kingdom is understated by the omission of a factor for relative poverty.[21]

The excess of the Danish and Swedish tax ratios over the British in Table 11 is entirely (and more than entirely) accounted for by the ratio of personal income tax to gross national product. The excess over the United Kingdom in Table 11 is 6.2 percentage points for Denmark and 1.7 percentage points for Sweden. But the corresponding excesses for personal income tax are 10.4 for Denmark and 7.4 for Sweden.

This might suggest that taxes on income are generally higher in Denmark and Sweden than in the United Kingdom. But it is not so. 1972 rates of income tax in the United Kingdom rose to 75.44 per cent on earned income and 88.75 per cent on investment income; these figures compared with

TABLE 11

Index of tax awareness 1972

		Ratio of tax receipts to gross national product, after deduction of taxes on general consumption and social security contributions	Ranking from Table 1 column (1)
		(Percentages)	
1.	Denmark	33.3	2
2.	Sweden	28.8	3
3.	United Kingdom	27.1	9
4.	Canada	25.5	10
5.	Ireland	23.8	11
6.	Norway	23.1	1
7.	Australia	22.6	14
8.	United States	20.6	13
9.	Netherlands	20.5	4
10.	Austria	20.4	5
11.	Germany	18.2	6
12.	Belgium	17.6	8
13.	Japan	17.0	16
14.	Switzerland	16.4	15
15.	Italy	15.3	12
16.	France	12.2	7
	Average	21.4	

Source: Tables 1 and 3: *Recent and Prospective Trends*

some 58 and 70 per cent in Denmark and 78 and 80 per cent in Sweden respectively, including the wealth taxes and average local income taxes in these two countries. The United Kingdom rates have been raised to 83 and 98 per cent respectively since 1974. Thus the United Kingdom full rates of income tax were already in 1972 higher than the corresponding rates of income tax levied by Denmark and Sweden; and the comparison has become much starker since 1972. Where the United Kingdom differs from Denmark and Sweden is in the much larger exemptions, reliefs and other privileges which it grants to poor and middle-income taxpayers.

The burden of income tax on the rich in the United Kingdom is not lower, but higher, than in Denmark and Sweden although the ratio of income tax to gross national product is, not higher, but lower. Income tax is a tax that bears relatively heavily on the rich (by comparison with taxes on goods and services) and increasingly so as income rises; but the income tax takes in different countries as proportions of gross national product are so defective as measures of the relative burdens on the rich that the answer may be given the wrong way round. This indicates the need for a measure of the tax burden distinguishing between the burden on the rich and the burden on the whole population. This is the concept of tax graduation (or 'progressiveness'), and I have explained elsewhere a method which *increases* the measure of graduation (or *intension*) for any given maximum rate at any given income level when the yield of income tax in total is *reduced* (and thus when its ratio to gross national product is *reduced*).[22] This measurement of tax graduation leads to the question of fiscal politics and the measurement of fiscal policy more generally.

So third, fiscal politics: the perception of taxes leads to tax graduation and thus fiscal politics. The perception of taxes is about differences in character between one tax and another: the most perceptible taxes are the least acceptable for those whose purpose is to minimise the infliction of pain, though they may be the most acceptable for those whose purpose is to minimise the economic intervention of government in a society that is effectively democratic (responsive at the level of government to opinion at lower levels). The progression to fiscal politics adds a further dimension which has the paradoxical result of making the situation clearer rather than more confused. Taxes on capital, for example, are relatively painful (painful per unit of yield). In terms of fiscal perception, this means that by the criterion of pain they are relatively unacceptable whereas by the criterion of government intervention they are relatively acceptable. But the criterion of fiscal politics resolves these inconsistencies. In terms of the political distinction between right and left, as ordinarily understood, the left favours more government intervention (at least relatively to the right); the left also favours more painful taxes (at least relatively to the right) in the sense that it would shift the burden from spending to earning and

saving. These contrasting policies are compatible (or competitive) in a democratic system in the sense that the taxes inflicted by the left are more painful but have fewer victims in a situation where income and savings are skewed to the right (the *statistical* right, *not* the *political* right: in other words where there is a long 'tail' of rich people or people with high earnings). But this has everything to do with skewness and nothing to do with equality or inequality. Skewness is a *secondary* measure of inequality.[23] Two distributions can be equally skew, but one can be more unequal; two distributions can be equally unequal, but one can be more skew. Thus the more skew distribution can be the less unequal, and *vice versa.*[24] The political combination of relatively heavy taxes on the rich with relatively heavy taxes on earning and saving by comparison with spending is due to a situation in which richer people save relatively more of their incomes than poorer people (the income elasticity of saving is positive); the opposite relationship is possible, especially if an economy is in long-term decline.[25] The left believes in more government intervention and the right in less; and each side believes in the democratic acceptability of its policies, at least in the long term. In addition, a certain proportion of the richest voters are written off by the left as politically expendable. Thus to the left a tax may be the more *acceptable* because it is painful especially as it *increases* government intervention.The attitude of the right is the opposite: taxes on capital are the more *unacceptable* because they are painful especially as they *increase* government intervention.[26]

The measurement of fiscal politics, in the sense of right versus left, therefore requires a measure that takes into account not only the degree of government involvement but also the character of the taxes (the left being characterized by a high degree of government involvement and a high degree of fiscal pain) and the graduation of the taxes (the left being characterized by a high degree of graduation).

I have proposed a method elsewhere for the simultaneous measurement of these variables.[27] A coefficient with limits of zero and unity is calculated from the maximum rates of tax on expenditure, earned income, investment income, capital gains, capital transfers and wealth and from the average rates of tax at the points on the graduated schedules where these maxima are first levied. This measure is high when govern-

ment intervention is high, when the more painful taxes are relatively high and when the degree of graduation is high. Thus the measure is high for the political left and low for the political right. In this method excise duties are not distinguished from general consumption taxes.

The published figures for 1968 for the method explained above are reproduced in Table 12. These figures show the United Kingdom as substantially to the political left of the 14 other West European countries included in the comparison.

If the United Kingdom position is taken as 100, the nearest competitor (Ireland) was 70.57 and the furthest competitor (Belgium) was 38.99. The corresponding average figure for the 14 other countries was 53.20.

Table 12 may be taken as broadly representing the present contrast between the United Kingdom and the rest. Fourteen-country averages are of their nature slow-moving; in the United Kingdom, the top rates of tax on earnings and transfers have fallen since 1968, but the top rate of tax on investment income has risen.

TABLE 12

Coefficient of fiscal policy 1968

United Kingdom	0.2970
Ireland	0.2096
Sweden	0.2082
Italy	0.1996
Norway	0.1957
Denmark	0.1885
Netherlands	0.1531
France	0.1433
Luxembourg	0.1381
Austria	0.1356
Spain	0.1344
Finland	0.1342
Portugal	0.1289
Germany	0.1273
Belgium	0.1158
14 country average (excluding UK)	0.1580

Source: *The Measurement of Fiscal Policy*, Table 15.

G. The tradition and the truth

The question of tax take leads to tax burden, tax awareness and fiscal politics. It is hardly possible to discuss tax take indepently of the logical and normative preconceptions informing the analysis of fiscal policy.

I have argued elsewhere that the traditional academic consensus on the analysis of personal taxation is in most of its essentials fallacious.[28] This is primarily due to the use of inappropriate concepts. In particular, the traditional classification of personal taxes into taxes on income, capital and expenditure is inferior to a classification into taxes on earning, spending and new saving. All taxes on investment income and its parent capital are taxes on saving. Taxes on investment income and taxes on capital are alternative, not complementary, and likewise different taxes on capital are alternative to each other: the higher the level of any one tax on capital, the lower, not the higher, should be the level of other taxes on capital and the tax on investment income.

These faults of analysis are not minor or technical matters: they have generally led to mistakes in the direction of the argument (more inequality for less inequality, more 'progressiveness' for less 'progressiveness' and so forth). Two of these fallacies require mention here.

The first is the belief that a steepening of the gradient of 'progressive' taxation makes the tax structure more 'progressive'. In reality, it may make the structure either more 'progressive' or more proportional.[29] It has wrongly been assumed that 'progressiveness' and revenue yield go together (vary directly); in reality the relationship is the opposite (given the height and location of the maximum tax rate, they vary inversely). Thus it is wrong to infer that United Kingdom taxes are not exceptionally 'progressive' because their yields are not exceptionally high; on the contrary they are the most sharply graduated in Europe as well as reaching the highest maximum rates.[30]

The second fallacy is the belief that the 'regressiveness' of taxes on expenditure offsets the 'progressiveness' of taxes on income and thus diminishes the 'progressiveness' of the tax system as a whole. The arguments demolishing this mountain of misconception need not be repeated here.[31] It is wrong to argue that the British tax system is roughly proportional because the middle three-quarters is taxed proportionately at

the basic rate of income tax and the 'progressiveness' of the taxation at the top is offset by the 'regressiveness' of the taxation at the bottom.[32] There is no general presumption that proportional taxes on expenditure make a tax system less 'progressive'; the effect might just as well be the opposite, if indeed the proposition can be construed at all. The British tax system is the most sharply graduated in Europe, notwithstanding the levying of a proportional income tax over wide ranges of income.[30]

The contentions that the British income tax structure or whole tax system is 'not very progressive' or 'almost proportional' help to create the impression that the British are not heavily taxed. These contentions do not survive analysis.

H. Maximum tax yield

This section and the appendix of the same name are concerned with variations in the yield of tax as tax rates change.

Tax rates are subject to diminishing returns throughout the range of possible variation. For arithmetical reasons, a tax increase of one percentage point is a proportionate increase of infinity when tax is zero, of 1 per cent when tax is 100 per cent (tax being half the amount paid) and of less than 1 per cent when tax is higher. The economic argument from diminishing returns is separate and additional. The vulnerability of the tax yield to the operation of diminishing returns increases as the tax rate rises. Eventually the tax becomes prohibitive and the yield falls to zero.

The analysis in the appendix applies equally to goods and services, work and saving. For work and saving, as for goods and services, the analysis is from the side of demand, not of supply.

New saving is subject to the burden of all incremental taxes on investment income and its parent capital – all the taxes attracted by saving and avoided by spending. Old saving is existing capital. Old saving is vulnerable to confiscation in a way that new saving is not: new saving may be taxed at up to 100 per cent of the income, whereas old saving may be taxed at up to 100 per cent of the capital and therefore much more than 100 per cent of the income. But as long as old saving is not expropriated overnight the relationship between new

saving and old saving is symmetrical at the margin: the taxes that are incurred by new saving are avoided by reducing old saving (by drawing savings down). The increase in tax is the same for £100 of new saving as for not drawing down £100 of old saving; the reduction in tax is the same for reducing old saving by £100 as for not making £100 of new saving.

Although it is theoretically possible for temporary saving, like saving for pensions, to be price-inelastic or 'perverse' (the amount saved varying inversely with the net-of-tax yield), this is not possible for permanent saving (saving proper, saving as such, saving other than a mere deferment of consumption).[33] The exceptions in an orderly system are trifling, small sums put by to guard against emergencies. In a disorderly system, the exceptions may be substantial: provision for emergencies may preclude any other use of funds, and the taxpayer may forgo a high standard of living in the present in the hope of limiting the reduction of his living standard in the future. The present British system is in general disorderly, with saving generating negative returns even before payment of tax. The application of traditional, or indeed any rational, economics must assume that this situation is temporary: that saving yields a positive return and that permanent saving rises as the net-of-tax yield rises, even though temporary saving may fall.

For goods, services and work demand may be initially inelastic even though it eventually becomes elastic as tax rates rise. For permanent saving, an inelastic demand is, with trifling exceptions, irrational and in this sense impossible. The permanent saver's demand for saving is thus exceptionally price-sensitive. Traditional analysis, from the side of supply, has been doubly wrong, first, in failing to distinguish between temporary and permanent saving and, second, in suggesting that saving is relatively insensitive to variations in price.

The distinction between temporary and permanent saving indicates that temporary saving has more taxable capacity (less price elasticity) than permanent saving. In practice, permanent saving has been taxed at rates up to infinity and beyond; the most important form of temporary saving (saving for pensions) has at the same time been loaded with privileges (contributions being tax-deductible to employer and employee and pensions themselves being taxed as earned income). By the criterion of maximum revenue yield,

temporary saving should be taxed more heavily than permanent saving; in practice, permanent saving is taxed to the point of total confiscation and beyond, while temporary saving is not taxed at all.

The point of maximum tax yield is to be found at a higher tax rate than the optimum social rate under any other concept of society's best interest than one which identifies the interest of society with the interest of the fisc. Taxes are not alike in their nature and those that are levied at the highest rates are in general those which provide the least opportunity, and sometimes even reduce the opportunity, for increasing public expenditure or reducing taxes elsewhere.[34] It is worth emphasizing that all taxes on permanent saving are anti-social (against the interest of society) inasmuch as the loss to the rest of society exceeds the gain to the fisc.

The analysis in the appendix yields the following implications for policy.

(a) The fisc exposes itself to increasing risk as tax rates rise. At any rate of tax, the maximum increase in yield from a 1 per cent increase in the rate of tax is 1 per cent; the maximum reduction is 100 per cent. The likelihood of reduction relatively to increase rises as the tax rate rises. Tax rates are measured net, not gross: thus an increase from 98 to 99 per cent gross is equivalent to an increase from 4,900 to 9,900 per cent net.[35] The United Kingdom, as the country with the highest tax rates, is particularly exposed to the danger that these rates may damage the interest of the fisc as well as the taxpayer.

(b) Column (1) of Table 13 shows the maximum gross rates of tax on earned income for 1975 in the Nine countries of the European Economic Community. Column (2) gives the reciprocal of column (1), and column (3) is column (2) minus unity. Column (4) gives the reciprocal of column (3). It is also the net rate of tax. The rationale is explained in the Appendix (see Table 15). Column (4) gives the probabilities, if a country with a 50 per cent tax rate has a 50-50 chance of gaining or losing revenue yield by increasing its tax rate, that countries with higher rates will lose by increasing theirs; conversely it gives the probabilities that the high-tax countries will gain revenue from a tax reduction. The position of the United Kingdom is 22 per cent worse than that of its nearest competitor (Ireland), 542 per cent worse than that of the

TABLE 13

Earned income taxation and maximum tax yield (1975)

	(1) Maximum gross rate of tax on earned income	(2) 100 ÷ (1)	(3) (2) − 1	(4) 1 ÷ (3)
France	43.20	2.32	1.32	.76
Germany	56.00	1.79	.79	1.27
Belgium	63.00	1.59	.59	1.70
Luxembourg	57.00	1.75	.75	1.33
Denmark	54.60	1.83	.83	1.20
Netherlands	71.00	1.41	.41	2.45
Italy	72.00	1.39	.39	2.57
Ireland	80.00	1.25	.25	4.00
United Kingdom	83.00	1.20	.20	4.88
Average of the 8	62.10	1.61	.61	1.64

Source: *Taxation in Western Europe* (Confederation of British Industry, eleventh edition); European Taxation (International Bureau of Fiscal Documentation, Amsterdam); Tax News Service (IBFD, Amsterdam).

furthest (France) and 198 per cent worse than the average of the other eight. The probabilities in column (4) are *relative*, not *absolute*; and they *understate* the disadvantage of the United Kingdom by comparison with the other countries. (Appendix). It is worth emphasising that United Kingdom taxes on earning (and saving) can be avoided, not only by working less and spending more, but also by emigration.

(c) For saving, the situation cannot be represented in this way at the top of the scale. A tax of more than 100 per cent gross, and thus of more than infinity net, is irrational and in this sense impossible: a tax of more than 100 per cent gross cannot be imposed in the long term if taxpayers behave rationally. But saving is already taxed at up to 98 per cent gross on investment income alone; and heavy taxes are levied on capital gains in addition and much heavier taxes on capital transfers (capital gains tax rises to 30 per cent gross and capital transfer tax to 75 per cent gross). Unless a miracle is granted, capital gains tax and capital transfer tax cannot be defrayed out of the yield (that is, out of the 2 per cent of the yield that is left after tax on the yield is paid at 98 per cent). The tax on permanent saving therefore rises to more than

100 per cent gross or infinity net (Appendix). In these circumstances, the yield of tax on new saving must be zero, except in so far as taxpayers behave irrationally;[36] and the return from old saving must be negative so that the maintenance of old saving is irrational except in so far as there are time lags or expectations of policy changes. Any tax on saving at more than 100 per cent gross is thus at best living on borrowed time; but this is not the limit of the damage. The tax paid on old savings shows up in the statistics, even at a rate of more than 100 per cent gross; the taxpayer may be unable to adjust his affairs in time, or he may be unable to spend his capital quickly enough, or he may be hoping for a change in fiscal policy or he may be preparing to emigrate. What does not show up in the statistics is the new saving not made or the old saving drawn down as a result of the attempt to levy tax on saving at more than 100 per cent gross. (p.48, Section H). Even if official statistics show a positive return from taxes on saving at more than 100 per cent gross (which they cannot fail to do), the real or economic marginal yield from taxes at these rates is certainly negative for permanent saving and arguably negative for temporary saving; in other words, the fisc as well as the taxpayer would benefit if taxes on saving were reduced to a maximum of total confiscation (100 per cent gross or infinity net). Similarly, the fisc would benefit if the rate of tax were reduced below 100 per cent gross, at least for the first few points of that reduction.[37]

(d) Changes in rates of tax also have implications for the yields of other taxes. These implications, which need not qualify the foregoing argument, are discussed elsewhere.[38]

In conclusion, therefore, there are a number of separate and cumulative reasons why the United Kingdom fisc may be expected to lose both absolutely and relatively to other countries, from the present high rates of tax on earning and saving, and to gain from their reduction. The taxpayer's interest in these tax reductions would parallel that of the fisc.

I. Inflation

Inflation and taxation each aggravate the burdens imposed by the other. Inflation increases effective tax rates and therefore increases the risk that any given nominal rate of tax will be beyond the point of maximum tax yield. The United

Kingdom fisc is especially exposed to the risk that any given nominal rate of tax will be counter productive in terms of yield, since the United Kingdom has at present the highest rate of inflation in the OECD outside Iceland.[39]

The effects of inflation on the burdens and politics of taxation have been analysed in detail elsewhere.[40] The essential distinction is between taxes on earning and taxes on saving. Inflation imposes no additional burden on taxes on earning unless they are graduated: if they are graduated, the additional burden imposed by inflation is heaviest for middle incomes, at the point where the ratio of marginal to average net income is lowest. Inflation imposes an additional burden on taxes on saving whether they are graduated or not: the additional burden is a function of the rate of tax on saving (especially if levied in the form of taxes on income and capital gains) and not a function of tax graduation.

If taxes on saving are already confiscatory even without inflation, inflation increases the range over which it is irrational to save and irrational not to draw savings down. Given the rate of inflation, this range is reduced by a reduction in taxes on saving and the budgetary cost of cutting taxes on saving is reduced correspondingly. In other words, the budgetary cost of cutting taxes on saving is reduced as inflation increases.

J. Harmonization

United Kingdom taxes are the highest in the EEC or even the OECD, tax by tax as well as in total, taxes on gifts being amalgamated with taxes on bequests (p.25) and taxes on wealth being amalgamated with taxes on income or transfers.

Table 14 shows the maximum rates of tax on earned income, investment income and transfers for the nine countries of the EEC in 1975. The rates are given first gross and then net. (Appendix). Transfers are to lineal descendants, this being much the most important category of transfer. The rates for investment income include wealth tax where there are overall ceilings, that is, in Denmark and the Netherlands. In the other countries with a wealth tax, the wealth tax would most logically be combined with the transfer tax;[30] the results would not be substantially affected.

TABLE 14

Maximum percentage rates of tax 1975

	(1) Earned income	(2) Investment income	(3) Transfers
Gross rates			
Belgium	63.00	63.00	17.00
Denmark	54.60	70.00	32.00
France	43.20	60.00	20.00
Germany	56.00	56.00	35.00
Ireland	80.00	80.00	55.00
Italy	72.00	72.00	31.00
Luxembourg	57.00	57.00	8.00
Netherlands	71.00	80.00	17.00
United Kingdom	83.00	98.00	75.00
Average of the 8	62.10	67.25	26.87
Net rates			
Belgium	170.27	170.27	20.48
Denmark	120.26	233.33	47.06
France	76.06	150.00	25.00
Germany	127.27	127.27	53.85
Ireland	400.00	400.00	122.22
Italy	257.14	257.14	44.93
Luxembourg	132.56	132.56	8.70
Netherlands	244.83	400.00	20.48
United Kingdom	488.24	4900.00	300.00
Average of the 8	191.05	233.82	42.84

Sources: *Taxation in Western Europe* (Confederation of British Industry, eleventh edn.); European Taxation (International Bureau of Fiscal Documentation, Amsterdam); Tax News Service (IBFD, Amsterdam); Annemarie Mennel: *Die Steuersysteme in EWG Staaten, EFTA Staaten und den USA* (Verlag Neue Wirtschafts-Briefe, Herne/Berlin, 1974).

Table 14 shows that harmonization of United Kingdom tax rates with those of the Eight would require a cut of 25.2 per cent in the gross rate of tax on earned income, 31.4 per cent in the gross rate of tax on investment income and 64.2 per cent (nearly two-thirds) in the gross rate of tax on transfers. The corresponding reductions in the net rates would be 60.9 per cent, 95.2 per cent and 85.7 per cent. These tax cuts

would be inexpensive and might more than pay for themselves, not only in terms of resources, but even in terms of yield, as is explained in Section H.[34]

K. A track through the jungle

There is so much confusion among professionals about the degree of overtaxation in the United Kingdom that it is understandable if the layman loses his way. This paper tries to mark a track through the jungle.

There are two connected reasons why inconsistent answers are given to the questions whether or how far the United Kingdom is overtaxed either absolutely or relatively to other countries. The first is that there are different statistical series coming from different sources and giving different answers. The second is that the questions are themselves susceptible of different interpretations. The reasons are connected because the differences in the statistical series are essentially due to differences in the underlying concepts. The immediate sources of the statistics differ (national governments, EEC, OECD, UNO); but the ultimate source of the statistics is the same, the figures of national income and expenditure compiled by national governments and reported to international organisations.

There may be no single concept or statistical series that is superior to all others for all purposes; but this does not imply that one series is as good as another. Nor does it imply that their relative merits are a question of little consequence. On the contrary, when governments are taking about half of national income for public expenditure, the sources and uses of these funds are arguably as important as all other economic questions combined.

Thus different measures of tax take provide different measures of the quantitative burden corresponding to differences in the underlying concepts. But there are also differences in what might be called the qualitative burden. In numerical terms the qualitative burden is something like a weighted average: it allows for the possibility that taxes measured in units of monetary yield may not be equivalent in other dimensions. This paper has examined a number of these divergences. One is the difference between tax take and tax rates; another is the difference between the nature of different taxes. The qualitative burden of taxation is

inherently a subjective concept; but there is no concept of the quantitative burden that is wholly objective.

As an example of such conflicts, it is often argued, and even more often implied, that 'the money has to come from somewhere': given the level and composition of government expenditure, the taxes imposed on one taxpayer lighten the load imposed on another. But it is also argued, and in my opinion more correctly, that in view of the differences in nature between one tax and another this may be exactly the opposite of the truth: the higher the level of tax on permanent saving, the higher, not the lower, the burden of other taxes.[34] This difference of assessment is fundamental for the concept of tax burden: the direction of the argument is reversed. (p.47, para.3).

The contrast above may be illustrated by way of an example. The purchaser of a slave has in principle a certain course of action to pursue, allowance made for errors of judgment, in order to maximize the present value of the slave's earnings (at present rates of discount) until the time of the slave's death; the slave-owner may deviate to the one side through cruelty or to the other through kindness. An *enlightened* slave-owner is one who treats his slaves with just enough consideration to elicit the maximum monetary return. No exact calculation is possible, but it is common sense that too many beatings, too much starvation will be counter productive. The British taxpayer would indeed be fortunate if the United Kingdom fisc were equally enlightened. It is argued in the Appendix and elsewhere in this paper that present rates of tax are probably counter productive even in terms of tax yield both absolutely and by comparison with other countries. This applies not only to the taxation of earnings but more especially to the taxation of saving (where the probability becomes a certainty). There is also the distinction between private interest and the interest of society. This may not be sharp for the slave-owner; but it is sharp for the fisc. The rates of tax that maximize the private interest of the fisc are significantly higher than those that maximize the interest of society as a whole, that is to say, the combined interest of the fisc and the taxpayer. (Appendix). In addition, increases in the yield of one tax may increase rather than reduce the burden to be imposed through other taxes. (previous para.). These constitute three separate and cumulative

reasons why the treatment of the taxpayer by the United Kingdom fisc compares unfavourably with the treatment of a slave by an enlightened slave-owner.

As is implied by the illustration of the last paragraph, there is some connection between the monetary motive and justice. The slave-owner who treats his slaves worse than the level of maximum monetary return is unjust as well as unbusinesslike. Similarly for the United Kingdom fisc.

The calculation of the burden thus leads to a study of the concepts by which the burden is calculated. The concepts commonly in use at present are substantially fallacious and substantially underestimate the real burden of taxation in the United Kingdom, whether in terms of justice or of economics. (p.47, para.2).

The camel's back is threatened not so much by the weight of United Kingdom taxation as by its structure, which is arguably the least just and least economic of any country in the OECD.

L. Industry under attack — How Taxes Frustrate the Creation of Wealth

The Camel's Back discusses the numerical comparisons between tax systems in different countries; *Industry under Attack*, intended for publication during 1977, updates these comparisons and goes on to explain their implications for the creation of wealth.

Industry under Attack starts by correcting some defects in the traditional concepts of wealth and its creation by industry. The correction of these defects indicates how narrowly the taxable capacity of wealth and its creation is circumscribed.

The tax policies that frustrate the creation of wealth increase the gap between the living standards of rich and poor; the tax policies that lead to similar patterns of spending between different income classes are policies that diminish or remove the present fiscal obstacles to the creation of wealth.

The same policies that remove the present obstacles to the creation of wealth also lead to its wider distribution.

Industry is the collaboration of labour and capital in the creation of wealth. In principle, either party may be too greedy for its own good and thus injure or kill the goose that

lays the golden eggs. In practice, only Labour is able and willing to make this mistake.

A policy that permits capital to be accumulated and capital ownership to be extended is as much in the interest of labour as of capital. For this purpose, drastic reductions are required in the taxes on saving and enterprise (in other words, on investment income and its parent capital).

Reductions in taxes on capital and investment income would increase the living standards of the ordinary worker and consumer as well as those of the investor.

APPENDIX

Maximum tax yield

This appendix explores the logic of variations in tax yield as tax rates change. The argument is equally appropriate to taxes on earning, on spending and on saving.[41] The analysis applies both to proportional and to graduated taxes. It applies both to an individual taxpayer and to a whole economy.

The analysis is carried out in terms of net tax rates. A net rate excludes the tax itself from the tax base. For example value added tax is levied at 8 or 12.5 per cent on a base exclusive of the tax: 100 plus tax at 8 or 12.5 on 100 gives 108 or 112.5. A gross rate is levied on a base inclusive of the tax: for example income 100, tax 35 per cent, income net of tax 65. Any tax may be expressed in either way. Net rates are used here because they are usually the method used for calculating *ad valorem* taxes on goods and services and taxes on goods and services provide our starting point.

The analysis is developed from an earlier analysis of changes in the taxation of goods and services.[42] As the rate of tax rises from zero to its highest level, the taxpayer's price elasticity of demand rises. The price elasticity of demand is the proportionate change in the quantity purchased as a result of a given proportionate change in the price. The tax is assumed to be either fully passed on into the price or levied directly on the customer.

As the tax rate rises from zero, six points are reached successively. If the tax is a tax on whisky, for example, the first point (1) is at a rate of zero and the second point (2) is the point of unitary price elasticity where the amount spent on whisky is unchanged by the increase in the rate of tax; between these points demand is price-inelastic and increases in the rate of tax increase expenditure (or turnover) on whisky although they reduce the quantity of whisky purchased. Beyond (2) expenditure falls as well as the quantity purchased; but revenue continues to rise faster than the price. At the zero-sum point (3) the proportionate rise in

the price equals the proportionate rise in the revenue yield. At the point of maximum revenue yield (4) the rise in the revenue yield has fallen to zero. At the point of equi-proportionate loss (5) the proportionate fall in revenue yield equals the proportionate rise in price. At the point of prohibition (6) the tax becomes prohibitive and quantity, expenditure and tax yield all fall to zero.

If point (2) is reached at a relatively low tax rate, the distance between (2) and (3) is relatively large; if it is reached at a relatively high tax rate, (2) and (3) are close together. Similarly for points (3) and (4) if (3) is reached at a relatively low or high tax rate. (5) lies much closer to (4) than to (6): at (4) a 1 per cent increase[43] in price causes a reduction in tax yield of zero; at (5) it causes a reduction of 1 per cent; at (6) it causes a reduction of 100 per cent.

If q is the quantity purchased and t is the rate of tax, then we have the following relationships at points (2) – (5).

(2) $$q_1 (1 + t_1) = q_2 (1 + t_2)$$

(3) $$\frac{q_2 t_2}{q_1 t_1} = \frac{1 + t_2}{1 + t_1}$$

(4) $$q_1 t_1 = q_2 t_2$$

(5) $$\frac{(1 + t_2) - (1 + t_1)}{(1 + t_1)} = \frac{q_1 t_1 - q_2 t_2}{q_1 t_1}$$

$$\therefore \quad \frac{q_2 t_2}{q_1 t_1} = \frac{1 + 2t_1 - t_2}{1 + t_1}$$

These equations give the following values of $\frac{q_2 t_2}{q_1 t_1}$ expressing the points in terms of the ratio of the new tax yield to the old.

(2) $$\frac{q_2 t_2}{q_2 - q_1 + q_2 t_2} \qquad \text{which} > 1$$

(3) $$\frac{1 + t_2}{1 + t_1} \qquad \text{which} > 1$$

(4) $$1$$

(5) $$\frac{1 + 2t_1 - t_2}{1 + t_1} \qquad \text{which} < 1$$

The analysis is exactly the same for work. Work is often thought of as the supply of a production factor, but it is also the demand for the purchasing power which it buys. What is purchased is the money value of goods and services obtainable after allowance for income tax and what is paid is effort or leisure forgone, which may be measured for convenience in hours. q is therefore pay net of income tax. t is income tax as a percentage of this net amount. Turnover is total pay. Price (1 + t) is measured in hours. Price goes up as tax goes up; but gross-of-tax pay per hour remains the same.

The analysis is also exactly the same for saving. Here what is purchased is income and what is paid is cash. q is the amount of net income purchased and turnover is the amount saved in the popular understanding of that expression. Price is measured in cash and is the cost of purchasing an investment income equal to the gross market yield. Market yields are assumed to be constant, like the constant net-of-tax price of whisky and the constant gross-of-tax pay per hour. Points (1) and (2) coincide for permanent saving although it is theoretically possible that there is an initially inelastic demand for temporary saving like saving for pensions.[44] Saving, like work, is demand as well as supply: it is the supply of a production factor and the demand for an income.

A tax increase has a price effect (in making the commodity more expensive) and an income effect (in making the taxpayer poorer). Between points (1) and (2) the income effect outweighs the price effect and there is an increase in expenditure (or turnover) on the commodity subject to tax; at (2) the effects exactly offset each other and expenditure remains unchanged; above (2) the price effect outweighs the income effect and expenditure falls.

If a tax on earnings is proportionate, not graduated, then income effects may outweigh price effects on low incomes even at high rates of tax: the taxpayer's principal interest may be survival. There is no analogue for this situation in the taxation of goods, services and saving. The same point can be put another way. For earnings, the limits of taxable capacity are physical: if the taxpayer is not left with the minimum for survival, he will die. For saving and for individual goods and services the limits are economic: if the taxpayer is not satisfied, he will take his custom elsewhere. But high rates of tax on low incomes are merely a theoretical possibility and

of little consequence within the OECD where taxes on earnings are graduated and are levied at high rates only on high incomes.

When taxes are graduated the analysis applies to each tax increment as though it were a separate tax. For example, if tax on earnings is levied at a marginal rate of 50 per cent gross at £10,000 and thereafter 60 per cent at £12,000, 70 per cent at £14,000, 80 per cent at £16,000, 90 per cent at £18,000 and 95 per cent at £20,000, then the analysis applies first to the additional 5 points of tax between 90 and 95 per cent then to the 10 points between 80 and 90 per cent and so on. For this purpose, tax rates are always measured from the higher rate downwards (a comparison between 95 and 90 per cent, not between 5 and 0 per cent). Since the income effect of tax increases falls as gross-of-tax income rises, successive increments on a graduated schedule are located successively nearer to (6) and further from (1).

The likelihood that an increase in tax rates will be counter-productive in terms of tax yield can be inferred from the foregoing analysis. For example, suppose that a number of different countries levy income tax at varying maximum rates. Suppose further that all these rates fall at the point (2) of unitary elasticity; this supposition is itself flattering to the high-tax countries, since price elasticity rises as income and the rate of tax increase (p.59). Then we can calculate the proportionate increase in the tax yield for each country. For a 1 per cent increase in the price, we have

$$\frac{1 + t_2}{1 + t_1} = \frac{101}{100}$$

t_1 and t_2 being net rates of tax as proportions of unity.

Thus $\frac{t_2 - t_1}{t_1}$, the proportionate increase in the tax rate, equals $\frac{t_1 + 1}{100\, t_1}$. Expressed as a percentage, this is the reciprocal of the gross-rate equivalent of t_1 expressed as a proportion. For example, if t_1 is a net rate of 0.25 or 25 per cent, t_2 is 0.2625 and $\frac{t_2 - t_1}{t_1}$ is .05 or 5 per cent; 5 is the reciprocal

TABLE 15

Percentage increase in tax yield for a 1 per cent increase in price at unitary price elasticity

(1) Gross rate of tax as a proportion	(2) Percentage rise in tax rate when price rises 1 per cent $1 \div (1)$	(3) Percentage increase in tax yield when price rises 1 per cent $(2) - 1$
.01	100.00	99.00
.02	50.00	49.00
.05	20.00	19.00
.10	10.00	9.00
.20	5.00	4.00
.30	3.33	2.33
.40	2.50	1.50
.50	2.00	1.00
.60	1.67	.67
.70	1.43	.43
.80	1.25	.25
.90	1.11	.11
.95	1.05	.05
.98	1.02	.02
.99	1.01	.01

of 0.20, which is the gross rate corresponding to a net rate of 0.25. At unitary elasticity we deduct 1 per cent from the quantity purchased when the price rises 1 per cent. Thus the yield rises by $\frac{t_1 + 1}{100\, t_1} - .01$

This is shown for illustrative tax rates in Table 15.

Table 15 compares the relative probabilities that different countries will increase revenue yield by increasing tax rates. Thus the chance of so doing is 50 times as good at 50 per cent gross as at 98 per cent gross. But this comparison is unduly favourable to high-tax countries, since the price elasticity rises as tax rates rise. The relative disadvantage of high-tax countries is therefore understated.

The policy implications of the analysis in this appendix are explained on pp.50-52.

NOTES

1. D. R. Myddelton: *Taxes Can Be Cut* in *Taxation: A Radical Approach* (Readings in Political Economy 4, Institute of Economic Affairs, 1970), p. 97. Myddelton argues that the yield from selective employment tax should be measured gross of repayments. A series of articles in Economic Trends has given annual figures by the Central Statistical Office on a subject closely related to net socialism, namely the net gains and losses from certain taxes and public expenditures at different levels of income. Whatever else the CSO figures may or may not show, they do not show the net gains and losses from taxes and public expenditure in total, nor can they be used to assess the 'progressiveness' of the tax system in total. See my *The Measurement of Fiscal Policy* (Confederation of British Industry, 1971), pp. 38, 46; page 38 lists a number of sources relevant to the question of net socialism and its distributive consequences.
2. Net socialism is the subject of Annex 1 in *Revenue Statistics of OECD Member Countries 1965-1972* which shows the tax/benefit position of a production worker with average earnings in 1972. However, taxes covered are limited to personal income tax and social-security contributions, and non-tax benefits are limited to transfer payments related to family circumstances. This source is cited subsequently as *Revenue Statistics.*
3. The technical term for this waste is the *excess burden* of taxation required to offset tax avoidance through changes in the pattern of expenditure or activity when competing expenditures or activities are taxed at different rates.
4. The logical interrelationships of discrimination between rich and poor combined with discrimination between spending, saving and earning are the subject of my *Is Capital Taxation Fair? The Tradition and the Truth* (Institute of Directors, 1974).
5. See Section H. The danger of counter productiveness has won some political recognition where the factors of production are acknowledged to be internationally mobile: speech by Sir Geoffrey Howe to the Institute of Taxation, September 13, 1975.
6. The OECD (Organisation for Economic Co-operation and Development) is not now an association of the world's richest countries, if ever it was, because there is no overlap of membership between OECD and OPEC (Organisation of Petroleum Exporting Countries).

7. Oskar Morgenstern: *On the Accuracy of Economic Observations* (Princeton University Press, second edn., 1963,) Chapter XIV.
8. *Revenue Statistics*, Table 18 and item 6000 in Part III B. Table 18 includes as taxes on capital United Kingdom rates which arguably are better classified as a tax on services (rental value of property); but the result is the same when the comparison is confined (Table 5 and p.25, para.iii) to taxes on the transfer of capital.
9. Institute for Fiscal Studies, London, Lecture Series No. 2, August 1975.
10. The combination of these definitions indicates the possibility that convergence may overcompensate for divergence; in other words, divergent countries may 'converge' so rapidly (above-average countries falling and below-average countries rising) that the last state may be more divergent than the first. But this is not a serious qualification of the method in practice.
11. *Recent and Prospective Trends*, note 9 (see note 9 above). The comparison between 1971 and 1972 in *Recent and Prospective Trends* is for 16 countries. The countries missing from the 23 countries of Tables 1-4 are Finland, Greece, Luxembourg, New Zealand, Portugal, Spain, Turkey.
12. *National Income and Expenditure 1964-74* (HMSO, 1975), Table 12.
13. *National Accounts Statistics: Sources and Methods* (HMSO, 1968), page 13 and elsewhere.
14. *Revenue Statistics*, Table 27, page 87.
15. *Revenue Statistics*, page 30.
16. For the relationship between *former SSNA, present SNA* and *new SNA*, see *National Accounts of OECD Countries 1961-1972*, pp. 2-3.
17. *Revenue Statistics*, p. 31.
18. *Revenue Statistics* includes on pages 45-46 a tabular reconciliation of the OECD list not only with the present (former, old) SNA but also with the 1971 edition of the ESA (European System of Integrated Economic Accounts) used by the EEC and with the 1974 classification of the International Monetary Fund. The former SSNA and the new SNA are not included.
19. See my book *Is Capital Taxation Fair?* (Institute of Directors, 1974), pages 49-52, 74-76, 93-103 (especially page 100).
20. Vito Tanzi: *International Tax Burdens — A Study of Tax Ratios in the OECD Countries* in *Taxation — A Radical Approach* (Institute of Economic Affairs, 1970).
21. *International Tax Burdens*, pp. 44-47.
22. *The Measurement of Fiscal Policy*, Chapters III, IV, V, VII C.
23. *The Measurement of Fiscal Policy*, Chapter II E and Appendix I G.
24. *The Measurement of Fiscal Policy*, Chapter II D and Appendix I F.
25. *Is Capital Taxation Fair?*, p. 76.

26. This oversimplified and almost symmetrical analysis leaves much unsaid, because some of the most important political qualities of taxes are unsymmetrical. These further considerations shift the balance of the argument in favour of the right. First, nothing has been said about economic efficiency: the right have traditionally put more emphasis on efficiency and the left on other arguments. Second, the analysis has implicitly assumed that the poor gain absolutely or at least relatively from fiscal assaults on the rich; but this assumption may be wrong, not only because of effects on efficiency, but for other reasons as well. (*Is Capital Taxation Fair?*, pp. 38-40). *Is Capital Taxation Fair?* treats these questions of gain and loss in parallel with an analysis in terms of equity.
27. *The Measurement of Fiscal Policy*, Chapter VIII. As a measure of tax 'progressiveness' the method proposed seems to be superior to other methods known to me (*The Measurement of Fiscal Policy*, Chapters II-VII).
28. *Is Capital Taxation Fair?*, especially Chapters II and III.
29. *The Measurement of Fiscal Policy*, Chapter III A; *Is Capital Taxation Fair?*, fallacy (2) in Chapter II.
30. *The Measurement of Fiscal Policy*, pp. xiii-xv, 60-64, 80-87, Appendix VIII (8); Section J.
31. *The Measurement of Fiscal Policy*, Chapter VI B; *Is Capital Taxation Fair?*, fallacy (3) in Chapter II; *The Myth of Tax 'Progressiveness'* (British Tax Review 1974 No. 6).
32. Joseph A. Pechman: *International Trends in the Distribution of Tax Burdens: Implications for Tax Policy* (Institute for Fiscal Studies, London, 1973); 'When the effective rates of all these taxes are combined, the progressive taxes are more or less offset by the regressive taxes — and this occurs regardless of the incidence assumptions used.' *Initial Report on the Standing Reference* (Royal Commission on the Distribution of Income and Wealth, Report No. 1, Cmnd. 6171, July 1975), p. 136: 'Taxes on expenditure are broadly regressive and can be shown to offset, to a large extent, the redistributive effect of taxes on income.'
33. *Is Capital Taxation Fair?*, pp. 61-67.
34. *The Economics of Tax Reduction* in *Taxation: A Radical Approach*, pp. 80-83; Barry Bracewell-Milnes: *Saving and Switching* (Sussex Tapes, 85 Linden Gardens, London W2; 1971), pp. 8-24.
35. For gross and net rates of tax, see Appendix.
36. Barry Bracewell-Milnes: *Redistribution in Reverse* (Aims of Industry, 1974), paras. 7-13. New saving is permanent new saving since the most important category of temporary new saving, pensions, is not taxed at confiscatory rates or indeed at all. See note 44.
37. The argument about tax rates of more than 100 per cent gross is not about *incentives* but *rationality*. Incentives are effective in so

far as taxpayers are responsive to tax rates of less than 100 per cent gross (total confiscation). A man does not work harder because his marginal rate of tax is reduced from 120 per cent gross to 110 per cent; if he is rational, he is not working at all above the point where the marginal tax rate exceeds 100 per cent. For reductions in tax below 100 per cent gross see pp.50-52.

38. *The Economics of Tax Reduction* II (ii).
39. Iceland was not included in the comparisons of tax take.
40. Barry Bracewell-Milnes: *Intension, Inflation and Growth: How Variations in the Tax Base Affect the Graduation of Tax Schedules* (International Institute of Public Finance, Saarbrücken, Proceedings of Barcelona Congress 1973).
41. p.47, para.2 of the text explains the significance of this threefold classification.
42. *The Economics of Tax Reduction*, pp.61-62.
43. 1 per cent changes are used in the argument for the sake of simplicity as an approximation for very small changes. The exposition would be more complex in terms of the differential calculus; but the essentials of the argument would be unaltered.
44. For temporary and permanent saving, see *Is Capital Taxation Fair?*, p.61 and note 17 to Chapter IV (p.89).

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