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THE COST AND DISTRIBUTION OF TAX EXPENDITURE ON OCCUPATIONAL PENSIONS IN IRELAND*

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Abstract

The pensions industry's argument that the favourable tax treatment of occupational pension funds amounts to tax deferment rather than tax exemption is evaluated using a net present value approach to estimate the cost of the tax foregone in taxing employee pension contributions on a consumption tax basis rather than an income tax basis. It is shown that the net present value estimate and the Revenue Commissioners cash flow estimate are in close agreement if tax rates for workers and pensioners are the same and that the Revenue Commissioners estimate is conservative if tax rates for pensioners are lower than for workers. A comparison is made of the trend in the cost of tax expenditure on occupational pensions since 1980 relative to the trend in the cost of direct expenditure on social welfare pensions and it is shown that the cost of tax expenditure has grown from around 10 per cent in 1980 to 66 per cent in 1997 and that the Exchequer support for the average participant in an occupational scheme has risen from one quarter to more than one-and-a-half times Exchequer expenditure for the average participant in the social insurance scheme. The assumption, therefore, that pensions can be provided at less cost to the Exchequer through private financial institutions is questionable given existing pension tax arrangements The distribution of the tax incentives provided for members of occupational pension schemes is evaluated and it is shown that most of the benefits accrue to those at the top of the income distribution.

THE COST AND DISTRIBUTION OF TAX EXPENDITURE ON OCCUPATIONAL PENSIONS IN IRELAND[1]

1. Introduction

There are two main reasons for favourable tax treatment of occupational pensions. On social grounds, it is intended to encourage people to make provision for their own retirement so that the State does not have to bear all of the burden of providing income during old age.[2] On economic grounds, it is designed to encourage long-term saving by increasing the rate of return thereby leading to an increase in investment and the output of goods and services from which pensions can be paid in the future.[3]

Income tax reliefs on such items of personal expenditure as pension contributions, health contributions, and mortgage repayments amount, in effect, to expenditure programmes delivered through the tax system and the term "tax expenditure" was introduced by Surrey (1973) to emphasise this point. This view was adopted by the Commission on Taxation (Ireland, 1982, p. 87) when it defined this type of tax support as:

> "an exemption or relief which is not part of the essential structure of the tax in question but [which] has been introduced into the tax code for some extraneous reason, e.g., in order to ease the burden of a particular type of taxpayer or to provide an incentive to apply income in a particular way or perhaps even to simplify administration. The choice of the term "tax expenditure" indicates that because these reliefs are not inherent in the structure of the tax they are equivalent in terms of revenue foregone to direct Government expenditure and should in general be judged by the same criteria and subjected to the same review process."

Since the early 1980s the Revenue Commissioners have published annual estimates of the cost to the Exchequer of the tax support for occupational pension schemes and of retirement annuity premiums paid by the self-employed. Although there is a common set of issues relating to the taxation of pensions for employees and the self-employed this paper will focus on the taxation of occupational pensions. The Revenue Commissioners estimates show that the cost of the exemption of the net income of approved superannuation funds has generally been one of the largest items in the list of tax expenditures.[4]

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[1] I am grateful to Paul Neenan of the Revenue Commissioners for providing estimates of the cost of the tax exemption of the net income of approved superannuation funds and for detailed explanations of how the estimates are derived, to my colleagues Brian Nolan and Richard Layte for providing data from the ESRI Living in Ireland survey, and to Yung-Ping Chen of the Gerontology Institute, University of Massachusetts, for supplying data on the sources of retirement income in the United States. I would like to thank Phil Agulnik, Bryn Davies, Connell Fanning, Liam Gallagher, Colm Kearney, John FitzGerald, Brian Nolan, Adrian Sinfield, Jim Stewart, Brendan Walsh, Sue Ward and Brendan Whelan for comments on earlier drafts presented at seminars in the Free University of Amsterdam at the Annual Meeting of the *European Network for Research on Supplementary Pensions* in October 1999, in the Economic and Social Research Institute in November 1999, and in the Department of Economics University College Cork in November 2000. None of them are responsible for the views expressed in the paper.

[2] See National Pensions Board (1988).

[3] See Feldstein (1992 and 1998).

[4] Official estimates of the cost of tax expenditures on pensions show that the same is true in Australia (Knox (1991), the United Kingdom (Sinfield (2000)), the United States (Munnell (1991)) and other OECD countries (OECD (1996)).

Despite this, and the pension industry's use of the tax favoured treatment of occupational pensions as a major selling point, the representative body of the industry, the Irish Association of Pension Funds (IAPF), argues that the Exchequer ultimately gets back most of the tax foregone on pension contributions and fund income through the taxation of pension benefits. For example, the IAPF (1998, p. 1) argues that "it is a common misconception that pension funds are exempt from tax" because "they actually operate on the basis of deferred taxation NOT no taxation" and that "the exemptions are balanced by the eventual taxation of benefits (except, of course, in relation to the lump sum) so the net effect is a tax deferral rather than an outright exemption" (IAPF (1999, p. 1)). The Pensions Board, the government's advisory body on pensions, appears to share this view as it argues in its recent report (Pensions Board (1998 p. 146)) on developing the national pension system that "the tax treatment of pensions, other than lump sums, is essentially tax deferral" Its predecessor, the National Pensions Board (1988), argued that "the present tax treatment of pension funds is simple to understand and operate, is broadly equitable and clearly acts as a major encouragement to the establishment of funded occupational pension schemes."

Some economists lend support to the tax deferral argument by arguing that official tax expenditure estimates overstate the cost by using a single tax year as the accounting period rather than the much longer period over which pension costs and benefits accrue. This argument will be considered in Section 3 after Section 2 provides an overview of how pensions are taxed in Ireland compared with other OECD countries. Section 4 examines how the aggregate cost of tax expenditure on occupational pensions compares with government expenditure on social welfare pensions and presents estimates of the average cost per participant to the Exchequer of tax support for occupational pensions relative to the average cost per participant of Exchequer expenditure on social insurance pensions. Section 5 shows how the benefits of the tax expenditure on employee contributions to occupational schemes are distributed by income group and Section 6 presents conclusions and makes some suggestions for making pension tax incentives more equitable.

2. Pension Tax Regimes in OECD Countries

In common with all other OECD countries taxes are raised in Ireland by taxing income rather than consumption. In broad terms, under a comprehensive income tax pension contributions would be taxed (T), the investment income and capital gains of the pension fund would be taxed (T), and pension benefits would be exempt (E). Because of the economic and social arguments for providing support for private pensions through the tax system a departure from these arrangements is permitted and pensions are taxed in a way which is consistent with the taxation of saving under a consumption tax. Under a consumption tax regime pension contributions would be exempt (E), investment income and capital gains would be exempt (E), and pension benefits would be taxed (see Dilnot (1992)). Where an income tax basis is used it is referred to as a TTE regime and where a consumption tax basis is used it is referred to as an EET regime. Clearly, a consumption tax regime is more favourable to saving than an income tax regime.

Table 1 provides a styilised summary of the regimes which are used to tax occupational pensions in OECD countries. From the first three columns of the table it is evident that most countries allow pensions to be taxed on a consumption tax basis. The main exceptions are New Zealand, which uses an income tax basis, and some of

Table 1: Sytilised Taxation of Occupational Pensions in OECD Countries

Country	Contributions	Pension Fund	Pension Benefits	
			Income	Lump Sum
Belgium	E	E	T	(t)
Canada	E	E	T	Unavailable
France	E	E	T	Unavailable
Germany	E	E	T	T
Ireland	E	E	T	E
Luxembourg	E	E	T	T
Netherlands	E	E	T	Unavailable
Norway	E	E	T	Unavailable
Portugal	E	E	T	(t)
Spain	E	E	T	T
Switzerland	E	E	T	T
United Kingdom	E	E	T	E
United States	E	E	T	Unavailable
Denmark	E	(t)	T	T
Sweden	E	(t)	T	Unavailable
Finland	(t)	E	T	T
Austria	(t)	E	T	T
Australia	(t)	T	T	(t)
Iceland	T	E	T	T
Japan	T	E	T	(t)
New Zealand	T	T	E	T

Sources: OECD (1994), Whitehouse (1999), Hall (2000), Dilnot and Johnson (1993), and Dalsgaard (2001).
Note: A small t indicates that the component is taxed at a lower rate than the standard rate of income tax.

the Nordic countries, Austria, Australia, Iceland, and Japan which use a hybrid of the two. Almost half of the countries in Table 1 allow some or all of the pension benefit to be taken in the form of a lump sum payment on retirement. Ireland and the United Kingdom stand out in this group as the only countries which totally exempt lump sum benefits from tax. All of the other countries which allow payment of lump sum benefits tax them at standard or lower rates of tax. Income limits exist in the United Kingdom, the United States and other OECD countries on the maximum benefit which defined benefit schemes can provide and there are contribution limits for defined contribution schemes, as there are in Ireland for both defined benefit and defined contribution schemes[5]. In 1997 the United Kingdom changed the tax treatment of Advanced Corporation Tax for tax exempt investors such as pension

[5] The income cap in the United Kingdom is currently £91,800 sterling; the maximum benefit allowed in the United States in 1996 was $120,000.

schemes. This reduced the tax-favoured position of pension funds relative to their position before the change.

The tax incentives provided in different countries to encourage saving through occupational or personal pensions were investigated some years ago by the OECD (1994). It adapted a method of measuring incentives for saving and investment which King and Fullerton (1984) developed for the corporate sector to estimate the marginal effective tax rate on different forms of household saving within the tax systems operating in OECD countries in 1993. The tax rates are calculated for those paying at the marginal rates applicable to the Average Production Worker and to the highest earners. The results presented in Figures 1 and 2 show the marginal effective tax rates on pensions for the two types of household using the common OECD inflation rate of 3.7 per cent on the reference date. They also assume that income levels during work and retirement are the same so pensions are not taxed at a lower rate during retirement. Figure 1 shows that the marginal rate of tax on pension saving is zero for those on average incomes in the United States, Spain, the Netherlands, Luxembourg, Germany, France, and Canada. These countries therefore tax pensions on a consumption tax basis. The marginal rates for Portugal, Austria, Ireland, the United Kingdom, and Australia are negative. This indicates that pensions are taxed in these countries in a regime which is more generous than a consumption tax regime. The marginal rates for the remaining countries are positive so their pension tax regimes are less generous than a consumption tax with the least generous regimes existing in the Nordic countries, Japan, Belgium and New Zealand where the preferred approach is, or approximates to, a comprehensive income tax regime.

Figure 2 shows that in countries in which the tax treatment of pensions is more generous than a consumption tax regime top rate taxpayers have a much greater incentive to invest their savings in pensions than workers on average incomes. Figure 2 also shows that the tax treatment of pensions for top rate taxpayers is more generous in Ireland than in any other OECD country.

3. Estimates of the Cost of Tax Reliefs on Occupational Pensions

Pension schemes in Ireland receive favourable tax treatment by applying to the Revenue Commissioners for "exempt approved status". To qualify for this special status a scheme must be established under an irrevocable trust, the assets of the fund must be held apart from the employer's other assets, and disposed of in accordance with a deed of trust. As none of the government agencies responsible for the operation of occupational pension schemes publish statistics on the financial operations of these schemes the Revenue Commissioners have based their estimates of the cost of tax reliefs on different components of pension income flows on whatever limited information is available from private sources. They have published annual estimates of the cost of the tax relief on employee contributions and of the cost of the exemption of the net income of approved funds since 1980/81 and annual estimates of the cost of the tax relief on employer contributions since 1993/94. They have also supplied me with unpublished estimates of the cost of the tax relief on lump sum pension benefits for the years 1984/85 to 1989/90. The most comprehensive estimate of the tax expenditure on occupational pensions is the value of the tax relief on the net income of approved superannuation funds. This is based on total contributions by employers and employees plus the investment income of the funds minus the amount paid out in pension benefits and lump sums.

For the tax years 1981/82 to 1988/89 the estimate was derived by multiplying the value of pension fund assets by an assumed rate of return (6% up to 1983/84 and 5% thereafter) by the standard rate of tax (35%). For 1989/90 and 1990/91 the estimate was made by using data from investment surveys carried out by the Irish Association of Pension Funds on (1) pension fund assets, (2) net cash flow, and (3) investment income. The value of pension assets was multiplied by an assumed rate of return (5%) and the product was added to the value of the net cash flow. The total was then multiplied by the standard rate of tax (29%). For 1991/92, 1992/93, and 1993/94 IAPF data on net cash flow and investment income were added and the result was multiplied by the standard rate of tax in the relevant tax year (29% in 1991/92 and 27% in 1992/93 and 1993/94). The IAPF investment surveys did not provide information on investment income for 1994/95, 1996/97 or 1997/98 so the Revenue Commissioners reverted to their earlier approach of multiplying the value of pension assets by an assumed rate of return (5%) and the standard rate of tax in the relevant year.

Table 2 and Figure 3 show the Revenue Commissioners estimates of the cost of the tax reliefs on (a) employee contributions from 1980/81 to 1997/98, (b) employer contributions from 1993/94 to 1997/98, and (c) the net income of approved superannuation funds from 1980/81 to 1997/98. The cost of the tax relief on employee contributions increased from £14 million in 1980/81 to £202 million in 1997/98. The cost of the relief on employer contributions grew from £142 million in 1993/94 to £343 million in 1997/98. The cost of the relief on lump sum pension benefits was about the same as the cost of the employee contributions for the years for which the data are available. For example, in 1984/85 the tax foregone on the lump sum benefit amounted to £40 million while the tax foregone on employee contributions was also £40 million and in 1988/89 the tax foregone on the lump sum amounted to £47 million while the tax foregone on employee contributions was £50.3 million. Over the whole period the cost of the tax relief on the net income of approved schemes rose from £30 million to £648 million. Relative to GNP, as Figure 4 shows, the most comprehensive measure available from the Revenue Commissioners of the cost of the favourable tax treatment of the net income of pension funds quadrupled from one-third of a percentage point in 1980 to 1.4 per cent in 1997.

While "all countries reporting pensions tax expenditures currently do so on a cash-flow basis" as the OECD (1996, p. 12) notes, such annual estimates have been criticised by Dilnot and Johnson (1993) and Knox (1991) on the ground that they do not take account of the tax revenue which will accrue to the Exchequer in the future when pensions are paid. A better way of estimating the annual cost to the Exchequer of tax expenditure on pensions, as Munnell (1991, p. 395) has pointed out, would be:

> "the difference between (1) the present discounted value of the revenue from current taxation of employer contributions and pension fund earnings as they accrue over the employee's working life, and (2) the present discounted value of the taxes collected when the employer's contributions and investment returns are taxable to the employee after retirement."

Information is available from a pension coverage survey by Hughes and Whelan (1996) which enables us to use her method to estimate how the cash flow estimate of the tax relief on employee contributions compares with a net present value estimate.

Table 2: Revenue Commissioners Estimates of the Cost of Tax Reliefs on Employee Contributions, Employer Contributions, and on the Net Income of Approved Superannuation Funds, 1980/81 to 1996/97 (£ million)

Year	Employee contributions	Employer contributions	Net income of approved super-annuation funds (Tax. Exp.)	Lump sum benefit	Tax exp./GNP
		£ million			Per cent
1980/81	14.0	-	30.0	-	0.33
1981/82	17.5	-	35.0	-	0.32
1982/83	24.0	-	40.0	-	0.32
1983/84	28.0	-	42.0	-	0.31
1984/85	40.0	-	45.0	40.0	0.30
1985/86	41.8	-	53.0	45.0	0.33
1986/87	44.4	-	62.0	39.5	0.35
1987/88	48.5	-	80.0	49.0	0.42
1988/89	48.3	-	89.0	95.0	0.44
1989/90	50.3	-	130.0	47.0	0.59
1990/91	52.5	-	200.0	-	0.78
1991/92	57.0	-	216.0	-	0.81
1992/93	56.0	-	189.0	-	0.67
1993/94	58.0	142.0	245.2	-	0.81
1994/95	87.0	160.0	344.0	-	1.05
1995/96	113.0	198.0	399.0	-	1.09
1996/97	154.0	266.0	500.0	-	1.25
1997/98	202.0	343.0	648.0	-	1.42

Sources: Annual Report of the Revenue Commissioners 1981 to 1999.
Note: The increase in the cost of the tax relief on the lump sum benefit in 1988/89 is attributable to the voluntary early retirement scheme for the public service.

In 1994/95 the Revenue Commissioners estimated that the cost of the tax foregone on employee contributions, using the standard rate of tax of 27 pence, amounted to £87 million. This implies that total pension contributions by employees were £322 million. The average effective tax rate for retired households in the top half of the income distribution in 1994 was 12 pence.[6] The average age of employees who were members of occupational pension schemes in 1995 was 40; the

[6] The average tax rate for retired households is derived from Table 14 of the Household Budget Survey 1994-95 (Ireland, 1997). It may overstate the average effective tax rate for pension beneficiaries. Although the majority of employees covered by an occupational pension scheme are concentrated in the top half of the earnings distribution, data kindly supplied by my colleague Richard Layte from the 1997 wave of the ESRI Living in Ireland Survey show that the incomes of households in which there were only elderly persons in receipt of some income from an occupational pension scheme were significantly lower than average household incomes and that about half of those in receipt of an occupational pension were in the bottom half of the income distribution in 1997.

normal pensionable age was 62; and the average expectation of life at age 62 was just over 16 years.[7] The rate of return on pension assets is assumed to be 5 per cent, the same as the rate used by the Revenue Commissioners. Some economists argue that the graduated tax rate effect, which is a central feature of a progressive income tax, should be ignored in estimating the cost of pension tax expenditure so that only the cost of deferring tax for a long period should enter into the calculation (see Bruce (1988, pp. 40-41)). In order to separate the effect of tax deferral from differences in worker and pensioner tax rates an estimate is also made on the assumption that workers and pensioners pay the same rate of tax, 27 pence in the pound.

Given these assumptions the net present value of the tax foregone under the option of current taxation of employee contributions and investment returns on these contributions and the net present value of the option of taxing pension benefits when they become payable are shown for different tax rates in Table 3. Figure 5 shows the income streams which are being discounted under the two tax options in order to evaluate the net present value of the tax foregone under each option. The difference between these two options is a net present value estimate of the revenue loss in 1994/95 of the deferral of tax until pensions are paid.

Table 3: Net Present Value Estimate of Difference between Deferred (EET) and Current (TTE) Taxation of Pensions Using Different Worker and Pensioner Tax Rates

Tax Rates	NPV of Current Taxation minus Deferred Taxation
	£ million
Worker = 27 pence; Pensioner = 12 pence	130
Worker = 27 pence; Pensioner = 27 pence	94
Revenue Commissioners Estimate	87

Source: See text

The estimates in Table 3 show that a net present value estimate of the cost of tax relief on employee pension contributions in 1994/95 which takes account only of the cost of tax deferral amounted to £94 million. This is quite close to the Revenue Commissioners cash flow estimate of £87 million. If the graduated tax rate effect is included the net present value estimate gives a much higher figure, £130 million, than the cash flow estimate. In either case there is a substantial revenue loss to the Exchequer from the favourable tax treatment of occupational pension funds. It is not, therefore, correct to argue that the tax arrangements for pensions simply amount to a deferral of tax and that most of the foregone revenue will be recovered by the Exchequer when pensions are paid.

The purpose of these estimates is not to produce a more precise estimate of the cost of the tax expenditure on employee pension contributions but, as Munnell (1991, p. 396) points out to:

[7] These data are taken from the 1995 pension survey by Hughes and Whelan (1996), revised data supplied by them to the Pensions Board, and the Irish Life Table 1990-92.

> "illustrate that the debate over the precise magnitude of the tax expenditures is an unproductive digression that diverts attention from the important topic of whether the favorable tax treatment accorded contributions to private pension plans represents an efficient and equitable use of scarce ... resources."

In Ireland debate has tended to focus on the official estimate of the cost of the tax expenditure on occupational pensions and there has been little discussion of other issues such as the relative costs of Exchequer support for occupational and state pension schemes, the performance of tax incentives in promoting pension cover, and the distribution of pension tax benefits by income group. However, there is some information available from reports on social welfare services, pension coverage surveys, the reports of the Pensions Board, and the ESRI Living in Ireland survey which throws some light on these issues.

4. Tax Expenditure on Occupational Pensions and Direct Expenditure on Social Welfare Pensions

At the end of the 1980s it was realised that ageing of the population in the early decades of the 21st century would increase the cost of state pension schemes in many OECD countries. Governments began to look for ways of changing the balance between state and private pension provision in an attempt to avoid raising taxes in the future (see OECD (1992)). As well as the problem of demographic ageing, Ireland faced additional problems as its flat-rate state pension was too low to adequately replace income from work for most workers, it did not have a state earnings-related pension scheme, and the coverage of occupational pension schemes was low and very unevenly distributed across sectors and occupations. The strategy recommended by the Pensions Board (1998) to cope with these problems is to gradually raise the flat-rate state pension up to 34 per cent of average industrial earnings, to accumulate a national pension reserve fund for investment in financial assets selected from global financial markets, and to try and increase pension coverage on a voluntary basis by providing access to Personal Retirement Savings Accounts[8].

The Board (1998, p. 109) noted that "the purpose of the fund would be to place a ceiling on the additional Exchequer contribution required for [social welfare pensions for] the foreseeable future" and it recommended that the tax treatment of individual retirement savings accounts should be more favourable than that for occupational pension funds. It did not provide any comparisons of past trends in Exchequer expenditure on social welfare pensions relative to tax expenditure on occupational pensions nor did it include in its projections out to 2046 estimates of tax expenditure on occupational pensions or on the Personal Retirement Savings Accounts which it proposed should be introduced to increase pension cover on a voluntary basis. Although the Board's strategy relies heavily on pension tax incentives it does not consider how effective existing tax incentives for occupational pensions have been in promoting coverage.

The policy message which comes through the various reports published as part of the National Pensions Policy Initiative is that public pension schemes should be

[8] The target is to increase coverage from 54 per cent of those aged 30-65 at work in 1995 to 70 per cent over a period of ten years or more.

restricted to paying modest flat-rate benefits while the bulk of retirement pension provision should be provided on a voluntary basis by private financial institutions on the assumption that publicly provided pensions are unaffordable in the long-term, due to population ageing, while privately provided pensions will be less costly (see Pensions Board (1997 and 1998)). I want therefore to present data relating to the trend in the cost of tax expenditure on occupational pensions and to the trend in the coverage of occupational pensions which raise some questions about the effectiveness of tax incentives in promoting pension coverage and about the assumption that privately provided pensions will be less costly in terms of Exchequer support through the tax system than direct government expenditure on social welfare pensions.

There are three social welfare pension schemes which have to be considered: the Contributory Old Age Pension Scheme for which the retirement age is 66, the Retirement Pension Scheme for which the retirement age is 65, and the means-tested Non-Contributory Old Age Pension Scheme for which the retirement age is 66. The Contributory Old Age Pension Scheme is financed on a pay-as-you-go basis by Pay-Related Social Insurance (PRSI) contributions by employers, employees, and the self-employed while the Retirement Pension Scheme is financed by similar contributions by employers and employees. Any shortfall between income and expenditure on the two contributory public pension schemes is met by the state out of general taxation.

The main difference between the two contributory schemes is that a retirement condition applies to the Retirement Pension up to age 66 whereas no such condition applies to the Contributory Old Age Pension which becomes payable at age 66. Applicants for a non-contributory pension have to satisfy a means-test to be eligible for a flat-rate pension. The basic non-contributory pension benefit for a single adult in May 2000 was IR£85.50 (= EUR 108.56) per week while the contributory and retirement pension benefit was IR£96.00 (EUR 121.89 per week or about 27 per cent and 31 per cent respectively of average industrial earnings[9].

Tax expenditure on occupational pensions and direct expenditure on social welfare pensions are compared in Table 4 and Figure 6 for the period 1980-97. At the beginning of the period in 1980 tax expenditure on occupational pensions amounted to 20 per cent of direct expenditure on contributory social insurance pensions, £30 million versus £153 million. By the end of the period it had increased to 98 per cent, £648 million versus £661 million. With respect to non-contributory social assistance pensions tax expenditure increased from 21 per cent in 1980 (£30 million versus £140 million) to over 200 per cent in 1997 (£648 million versus £317 million).

In terms of the combined social welfare pension schemes the cost of tax expenditure on occupational schemes increased from 10 per cent in 1980, £30 million versus £293 million, to over 66 per cent by 1997, £648 million versus £978 million (see Figure 7). Given the average rates of growth of tax and direct expenditure during the period 1987-97 it would only require a few more years growth at these rates for the cost of tax expenditure on occupational pensions to exceed the direct cost of expenditure on social welfare pensions. The introduction of Personal Retirement

[9] From May 2001 the non-contributory pension for a single adult is £95.50 (EUR 121.25) and the contributory pension is £106.000 (EUR 134.59).

Savings Account (PRSA) with more favourable tax treatment than occupational pension schemes, as recommended by the Pensions Board, is likely to increase the cost of tax expenditure on pensions. One effect of implementing this recommendation may be that Exchequer support for social welfare pensions will be limited in the future while the cost of its support for private pension schemes, benefiting a much smaller number of people, will not be.

Table 4: Direct Expenditure on State Pensions, Tax Expenditure on Occupational Pensions and Direct Expenditure as Per Cent of Tax Expenditure on Pensions, 1980-97

Year	Direct Expenditure on Contributory Old Age Pension & Retirement Pension	Direct Expenditure on Non-Contributory Old Age Pension	Direct Expenditure on State Pensions	Tax Expenditure on Occupational Pension Schemes	Tax Expenditure on Occ. Pensions as per cent of Direct Exp. on State Pensions
		£ million			Per cent
1980	153.0	140.2	293.2	30.0	10.2
1981	197.5	176.4	373.9	35.0	9.4
1982	259.3	225.0	484.3	40.0	8.3
1983	293.9	246.5	540.4	42.0	7.8
1984	325.9	264.1	590.0	45.0	7.6
1985	351.7	273.5	625.2	53.0	8.5
1986	374.5	283.9	658.4	62.0	9.4
1987	399.5	291.2	690.7	80.0	11.6
1988	417.2	291.8	709.0	89.0	12.6
1989	439.0	293.8	732.8	130.0	17.7
1990	464.9	301.5	766.4	200.0	26.1
1991	493.9	308.8	802.7	216.0	26.9
1992	529.5	317.2	846.7	189.0	22.3
1993	546.3	318.4	864.7	245.2	28.4
1994	569.0	319.1	888.1	344.0	38.7
1995	597.2	308.8	906.0	399.0	44.0
1996	626.0	310.3	936.3	500.0	53.4
1997	661.2	316.8	978.0	648.0	66.3

Sources:Annual Report of the Revenue Commissioners 1981 to 1999, Statistical Information on Social Welfare Services 1983 to 1997, and Special Tabulation from the Revenue Commissioners.

As only employees whose employers provide occupational pension plans benefit from tax expenditure on these plans whereas all workers ultimately benefit from social insurance pension expenditure it is important to consider how many people benefit from the two kinds of expenditure and to what extent they benefit on average.

Beneficiaries of State Expenditure on Pensions

The number of people insured for all social insurance benefits and the number of members of occupational pension schemes are shown in Table 5 and Figure 8 and the coverage rates are shown in Figure 9. The number of social insurance and social assistance pensioners and occupational pensioners are graphed in Figure 10.

Table 5: Insured Population, Contributory Old Age and Retirement Pensioners, Members of Occupational Pension Schemes and Occupational Pensioners, 1980-96

Year	Insured for All Benefits	Social Insurance Pensioners (COAP/RP)	Social Assistance Pensioners (NCOAP)	Members of Occupational Schemes	Occupational Pensioners	Percentage At Work Covered by Occ. Scheme
		Number				Per cent
1980	864,000	97,382	130,077	-	-	-
1981	944,000	99,494	129,331	-	-	-
1982	955,000	101,665	129,495	-	-	-
1983	963,000	104,449	128,538	-	-	-
1984	951,000	106,224	128,270	-	-	-
1985	965,000	108,892	126,058	476,200	91,700	44.2
1986	961,790	111,809	124,913	-	-	-
1987	952,390	115,214	124,419	-	-	-
1988	964,310	117,769	122,681	-	-	-
1989	937,100	120,607	120,632	-	-	-
1990	925,600	122,945	118,223	-	-	-
1991	966,300	125,000	115,950	469,103	-	40.6
1992	930,000	127,896	113,555	438,007	-	37.6
1993	968,300	130,261	111,011	467,890	-	39.5
1994	1,190,670	133,031	108,301	476,384	-	39.0
1995	1,279,600	134,940	102,984	476,600	103,500	37.2
1996	1,394,400	137,728	101,624	501,400	-	37.7
1997	1,505,300	141,815	98,835	519,469	-	37.6
1998	1,574,300	147,022	95,890	534,198	-	35.7

Sources: Sources: Statistical Information on Social Welfare Services, 1997, 1996, 1995,1993,1992, 1991, and 1990; Hughes (1994, Table 9) and Hughes and Whelan (1996); The Pensions Board Annual Report & Accounts, 1991 to 1997.

Note: The increase in the insured population between 1980 and 1981 may be due to a change in the way in which the data are classified. The membership figures for occupational pension schemes and the number of occupational pensioners in 1985 and 1995 are based on survey data in Hughes and Whelan (1996) and the membership figures for the remaining years are taken from the Annual Reports of the Pensions Board.

The effects of policy decisions to bring the Irish social welfare system more into line with the approach in most countries in the European Union by relying to a greater extent on social insurance than social assistance is evident from the growth in the population insured for all benefits, the increase in the number of contributory old age pensioners, and the reduction in the number of non-contributory old age pensioners. The number insured for all benefits increased by 82 per cent between 1980 and 1998 while the number at work during this period grew by 29 per cent. Consequently, the percentage of those at work insured for all benefits increased from 75 per cent to 100 per cent over the period. The total number of State pensioners remained fairly stable at between 230,000 to 240,000 but the number of social insurance pensioners increased from 97,000 to 147,000 while the number of social assistance pensioners fell from 130,000 to 96,000. Consequently, 60 per cent of pensioners received a social insurance pension in 1998 compared with 43 per cent in 1980.

Criteria by which to judge whether Exchequer support for occupational pensions is achieving its goals are: what percentage of those at work are covered by such schemes and is the coverage rate increasing over time? The last column in Table 5 shows that in 1985 only a minority of those at work, 44 per cent, were members of occupational pension schemes and that the coverage rate fell by 8 percentage points thereafter to 36 per cent in 1998. Thus, despite the continuing substantial support provided through the tax system for occupational pension schemes they fail to provide pension cover for the majority of the working population and they are failing to maintain coverage rates attained in the past when the working population was much smaller.

Putting information on the number of workers covered by social insurance and occupational schemes and the number receiving pensions together with the data on the cost of government expenditures on social insurance pensions and of tax expenditure on occupational pensions we provide estimates in Table 6 of the level and trend in support provided by the Exchequer for the average participant

Table 6: Average Direct Expenditure per Participant on Social Insurance Pensions and Average Tax Expenditure per Participant on Occupational Pensions in 1985 and 1995

	Social Insurance Pensions (COAP & RP)	Occupational Pensions	Ratio of Tax Expenditure to Direct Expenditure
	£		
1985	327	93	0.27
1995	422	688	1.63

Sources: See text.

in each type of scheme, where the number of participants is equal to the number of employees in the scheme plus the number of pensioners receiving benefits from it. The table shows that in 1985 Exchequer support for the average participant in an occupational pension scheme amounted to about a quarter as much as was provided to the average participant in the social insurance schemes. Over the next ten years however Exchequer support for occupational schemes grew very strongly so that in 1995 almost two-thirds more was provided for the average participant in an occupational scheme compared with the average participant in a social insurance scheme.[10]

[10] Most occupational pension schemes are integrated with the social insurance scheme to take account of the fact that all eligible employees will ultimately receive a social insurance pension. If this were allowed for, participants in occupational pension schemes would benefit from Exchequer support to an even greater extent than is shown in Table 6.

Despite the greater level of support provided for the average participant in an occupational scheme, it is striking that the great majority of pensioners remain dependent on social welfare pensions for an income during retirement. Table 7 compares the position in Ireland and the United States. Almost all pensioners in both countries receive a social welfare or social security pension and the amount they receive provides the largest component of their income in retirement. In addition the sources of income in retirement in the two countries are not very different with the exception of asset income.

Table 7: Percentage of those Aged 65 and Over Having Income from Various Sources in Ireland and the United States in 1995

Source of Income	Ireland		United States	
	Per cent with Income from this Source	Per cent of Total Income	Per cent with Income from this Source	Per cent of Total Income
Public Pension	83	55	94	44
Private Pension	23	23	36	19
Asset Income	24	3	69	18
Employment & Other Income	15	19	16	18
Total		100		100

Sources: Hughes and Whelan (1996, Table 3.4); Chen (1996).

In view of the trend in tax expenditure and direct expenditure by the Exchequer on pensions and the much greater support which is now being provided by the Exchequer for the average participant in an occupational pension scheme, it is questionable if pensions provided by private financial institutions are less costly to the Exchequer, under existing pension tax arrangements, than publicly provided pensions.[11] Since the Pensions Board's strategy for developing the pension system was published in 1998 some proposals have emerged for further development of the system[12]. These proposals and the Board's own proposals all have implications for Exchequer expenditure and it is important that all of the costs, including Exchequer costs, should be taken into account when evaluating them.

5. Distribution of Tax Expenditure on Occupational Pensions

With the reduction in recent years of mortgage interest tax relief the tax exemption of the net income of approved superannuation funds is now the most costly item in the Revenue Commissioners list of income tax reliefs.[13] Individual tax payers are obliged to include details on their annual income tax return of mortgage interest payments for which they are claiming tax reliefs. Consequently the Revenue

[11] The representative of the Minister for Finance on the Pensions Board noted in the Pensions Board (1998, p. 118) report that "despite the fact that a central element of the initiative was to secure substantially greater supplementary pension coverage, the scenario emerging for the next 50 years or so shows an increased rather than any diminishing reliance on the Exchequer to meet pension requirements. This would be particularly the case if the present pay-as-you-go system continues to apply."

[12] See Callender (2000) and McHale (2000).

[13] Structural reliefs are assumed to be part of the benchmark tax system.

Commissioners have information on the distribution of these tax reliefs by income class. Unfortunately, because of the way in which the reliefs on occupational pension contributions and pension fund income are given there is no official information on how much tax relief different interest groups claim for contributions to occupational pension funds. However, a household survey carried out by the ESRI in 1994 (see Callan, Nolan, Whelan, Whelan, and Williams, (1996)) contains information on weekly gross earnings of employees who are members of any type of pension scheme. Employees are ranked in Table 8 and Figure 11 in deciles by level of earnings.

Table 8: Employees Ranked by Weekly Gross Earnings Showing the Percentage with Pension Entitlements in 1994 by Income Deciles

Decile	Per cent
First	0.5
Second	8.9
Third	16.5
Fourth	35.6
Fifth	50.1
Sixth	59.7
Seventh	70.5
Eighth	79.4
Ninth	89.0
Tenth	92.7

Source: ESRI Living in Ireland Survey 1994.

The table shows that coverage of occupational pension schemes is virtually complete for the top three deciles; reasonably good for middle income employees in the fifth, sixth, and seventh deciles with 50 to 70 per cent having a pension entitlement; rather poor for low income employees in the second, third, and fourth deciles with only 10 to 35 per cent having an entitlement, and virtually non-existant for the bottom income decile[14]. This pattern of occupational pension coverage is very striking. It has been explained by Hughes and Nolan (1999) in terms of a segmented labour market model in which good fringe benefits are offered by employers as part of the total compensation package for moderate to high paying jobs to attract and hold onto well qualified employees while fringe benefits are not part of the compensation package for low paying jobs as there is generally an excess supply of poorly qualified job applicants.

The only data available to assess the distribution of tax support for occupational pensions come from the ESRI Living in Ireland survey. It contains information on the size of the employee contribution to occupational pension schemes but unfortunately not on the employer contribution. An estimate of the value of the tax relief given to employees can be derived by income class which will show whether the tax support provided for employee contributions is progressive, proportional, or regressive relative to income. The estimates of the value of the tax expenditure as a percentage of income take account of marital status, the standard personal allowances, and the relevant marginal tax rates. The aggregate value of

[14] The pattern is similar when pension coverage rates are estimated by age group. For example, the coverage rate for those under 30 was 1.3 per cent for the first decile and 79 per cent for the 10th decile.

pension contributions and of the tax relief are averaged across everyone in the income class whether they make a pension contribution or not. Figure 12 shows that tax support for employee contributions to occupational pensions is regressive. The value of the relief expressed as a percentage of weekly income increases from less than 0.06 per cent at the bottom of the income distribution to around 0.8 per cent in the middle and to about 1.6 per cent at the top. Thus, those on incomes of less than IR£41.00 per week receive hardly any benefit from the tax relief on occupational pension contributions while those earning over IR£720 per week benefit to the extent of 1.6 per cent of their weekly income. In terms of the total value of the tax relief which is given, the top 20 per cent of employee taxpayers receive more than 60 per cent of the tax expenditure while the bottom 20 per cent receive less than 0.5 per cent of it. The concentration of the benefits on the higher paid is similar to the picture found by the OECD (1994) for the United States and the Netherlands in an analysis of the distribution of their pension tax expenditures but different from the outcome in Australia and the United Kingdom where the benefits are more evenly spread across the income distribution (see Figure 13 for the Irish data and Figure 14 for the U.K. and the U.S.). The distribution of pension tax expenditures in Ireland is another example of the 'upside-down' nature of tax expenditures whereby, as Sinfield (1997, p. 20) notes:

> "The benefit is greater, the higher the income and the higher the marginal tax rate which is avoided as a result of the tax mechanism. The greatest beneficiaries are those who have the least needs by any measure used in social policy analysis."

There are two main reasons for this regressivity, as Le Grand and Agulnik (1998) point out. The first is that membership of occupational pension schemes increases strongly with income. The second is that the tax relief is given at the marginal rate of tax. Hence, the value of the tax relief as a percentage of income rises as income rises. The interaction of these two factors results in a steady increase in the absolute value of the tax relief on occupational pension contributions as the absolute value of income rises.

6. Conclusions and Policy Implications

The evidence presented in this paper shows that arguments that official estimates overstate the cost of tax expenditure on occupational pensions and that the Exchequer will get back most of the tax foregone on pension contributions and fund income are not well founded: the Revenue Commissioners estimate of the cost of tax expenditure on employee pension contributions is almost the same as a net present value estimate which takes account of the tax foregone through taxation on a consumption tax rather than an income tax basis and the favourable tax treatment of occupational pensions cost the Exchequer nearly £650 million in foregone revenue and amounted to almost 1.5 per cent of GNP in 1997.

The assumptions that increases in Exchequer expenditure on social welfare pensions cannot be afforded in the long-term, due to ageing of the population, and that supplementary pensions can be provided at less cost to the Exchequer through private financial institutions are questionable. Tax expenditure on occupational pensions now amounts to two-thirds of government expenditure on social welfare pensions and it will exceed direct expenditure in a few years time if present trends continue. As less than half as many people benefit from tax expenditure on occupational pensions as benefit from direct expenditure on social insurance pensions, far more is now provided through the tax system for the average participant in an occupational scheme than for the average participant in the social insurance scheme.

Examination of the level and trend in relation to the coverage of occupational pension schemes suggests that tax incentives have failed to provide pension coverage for a majority of workers or even to maintain coverage rates at the level attained in the past when the working population was much smaller.

Finally, the evidence from the Living in Ireland Survey shows that the argument that the present tax treatment of occupational pensions is broadly equitable is incorrect as most of the benefit of tax expenditure on occupational pensions is concentrated at the upper end of the income distribution.

These results have some implications for the taxation of occupational pensions and for the tax arrangements proposed for Personal Retirement Savings Accounts. With only just over a third of employees covered by occupational plans all taxpayers must pay higher taxes because of the revenue foregone due to the tax incentives for pensions. This inequity could be addressed by imposing restrictions on the tax incentives to target them on middle and lower income earners who need them most. There are examples from other OECD countries of how greater equity can be introduced into pension tax arrangements by, for example, phasing out the tax free lump sum, introducing an income cap on pension benefits, and taxing the returns on pension investments.

It has been recommended by the Pensions Board that Personal Retirement Savings Accounts should be made available to everybody whether they belong to an occupational pension scheme or not and that there should be no earnings cap whereby earnings in excess of the cap would not qualify for tax reliefs. If they are made available in this form, experience with Individual Retirement Accounts in the United States and Personal Pension Plans in the United Kingdom suggests that take-up is likely to be much greater by higher income earners than by middle and lower income earners.[15] There is a danger, therefore, that the introduction of individual retirement saving accounts may accentuate inequities in the pension system by providing another tax favoured savings vehicle for people who already have adequate pension cover. To avoid this danger, consideration should be given to experience in the United States which has changed the tax arrangements for Individual Retirement Accounts several times to try and target the tax incentives on middle and lower income earners.[16]

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[15] See Sabelhaus (1996) for evidence for the U.S. and Banks, Dilnot, and Tanner (1997) for the U.K.

[16] Individual Retirement Accounts in the United States were originally introduced in 1974 for workers who did not have occupational pension cover. In 1981 they were extended to all workers and in 1986 the tax deduction was restricted for workers with occupational cover to those with incomes below specified levels. In 1997 a maximum contribution, eligible for tax relief, of up to $2,000 per annum was allowed. The amount that was tax deductible varied according to the worker's income tax status, income, and pension coverage status and contributions could only be made out of earned income (see Employee Benefit Research Institute (1997, Ch. 16)).

REFERENCES

Agulnik, P., and J. Le Grand, 1998. " Tax Relief and Partnership Pensions", *Fiscal Studies*, Vol. 19, No. 4.

Banks, J., A. Dilnot, and S. Tanner, 1997. *Taxing Household Saving: What Role for the New Individual Savings Account?.* London: Institute for Fiscal Studies.

Bruce, N., 1988. "Pathways to Tax Expenditures: A Survey of Conceptual Issues and Controversies", in N. Bruce (editor) *Tax Expenditures and Government Policy.* Kingston, Ontario: John Deutsch Institute for the Study of Economic Policy.

Callan, T., B. Nolan, B. J. Whelan, C. T. Whelan, and J. Williams, 1996. *Poverty in the 1990s: Evidence from the 1994 Living in Ireland Survey.* Dublin: Oaktree Press, General Research Series No. 146.

Callender, R. 2000."Savings Plan is Timely Solution", *Irish Times*, 20 October, 2000.

Chen, Yung-Ping, 1996. *Final Report on Minority Access to Employer Pensions: A Statistical Analysis with Policy Recommendations.* Boston: Gerontology Institute, University of Massachusetts.

Dalsgaard, T. *The Tax System in New Zealand: An Appraisal and Options for Change.* Paris: Organisation for Economic Co-operation and Development, Economics Department Working Papers No. 281.

Department of Social Welfare, 1997. *National Pensions Policy Initiative Consultation* Document. Dublin: Department of Social Welfare and The Pensions Board.

Dilnot, A., 1992. "Taxation and Private Pensions: Costs and Consequences", in OECD, *Private Pensions and Public Policy.* Paris: Organisation for Economic Co-operation and Development, Social Policy Studies No. 9.

Dilnot, A, and P. Johnson, 1993. *The Taxation of Private Pensions.* London: Institute for Fiscal Studies.

Employee Benefit Research Institute, 1997. *Fundamentals of Employee Benefit Programs.* Washington, D.C.: Employee Benefit Research Institute.

Feldstein, M., 1992. "Commentary: Investment Policies to Promote Growth", in *Policies for Long-Run Economic Growth*: A Symposium Sponsored by the Federal Reserve Bank of Kansas City Jackson Hole, Wyoming August 27-29, 1992.

Feldstein, M., 1998. "Introduction" in M. Feldstein (editor), *Privatizing Social Security.* Chicago: The University of Chicago Press

Hall, K., 2000. "Lump-sum Payments – A European Favourite", *Investment & Pensions Europe*, September.

Hughes, G., 1994. *Private Pensions in OECD Countries: Ireland.* Paris: Organisation for Economic Co-operation and Development.

Hughes, G., and B. Whelan, 1996. *Occupational and Personal Pension Coverage 1995.* Dublin: Economic and Social Research Institute.

Hughes, G., and B. Nolan, 1999. "Competitive and Segmented Labour Markets and Exclusion from Retirement Income" in W. Salverda, B. Nolan, and C. Lucifora (editors) *Policy Measures for Low-Wage Employment in Europe.* Edward Elgar (forthcoming).

Ireland, 1982. *First Report of the Commission on Taxation: Direct Taxation.* Dublin: Stationery Office (Pl. 617).

Ireland, 1997. *Household Budget Survey 1994-95. Volume 1: Detailed Results for All Households.* Dublin: Central Statistics Office, Pn. 3934.

Irish Association of Pension Funds, 1998. *Fact Sheet.* Dublin: Irish Association of Pension Funds (mimeo.)

Irish Association of Pension Funds, 1999. *Submission to Government Working Parties on the National Pensions Policy Initiative.* Dublin: Irish Association of Pension Funds (mimeo.)

King, M. A. and D. Fullerton, 1984. *Taxation of Income from Capital: A Comparative Study of the United States, United Kingdom, Sweden and West Germany.* Chicago: University Press Chicago.

Knox, D. M., 1991. *Tax, Super and the Age Pension: The Issues of Cost, Equity and Incentives.* Sydney: Australian Tax Research Foundation, Research Study No. 14.

McHale, J., 2000. "Options for Inflation Control in the Irish Economy", *Quarterly Economic Commentary,* September. Dublin: Economic and Social Research Institute .

Munnell, A. H., 1991. *"Are Pensions Worth the Cost?",* National Tax Journal, September.

National Pensions Board, 1988. *Report on the Tax Treatment of Occupational Pension Schemes.* Dublin: Stationery Office.

OECD, 1992. *Private Pensions and Public Policy.* Paris: Organisation for Economic Co-operation and Development.

OECD, 1994. *Taxation and Household Saving.* Paris: Organisation for Economic Co-operation and Development.

OECD, 1996. *Tax Expenditures: Recent Experiences.* Paris: Organisation for Economic Co-operation and Development.

Pensions Board, 1997. *National Pensions Policy Initiative Consultation Document.* Dublin: The Pensions Board.

Pensions Board, 1998. *Securing Retirement Income.* Dublin: The Pensions Board.

Sabelhaus, J., 1996. "How Does Pension Coverage Affect Household Saving?" in P. A. Fernandez, J. A. Turner, and R. P. Hinz (editors), *Pensions, Savings, and Capital Markets.* Washington, D.C.: Pension and Welfare Benefits Administration, Office of Research and Economic Analysis.

Sinfield, A., 1997 "Social Protection versus Tax Benefits" in European Institute of Social Security, *Social Protection of the Next Generation in Europe*. The Hague: Kluwer Law International.

Surrey, S., 1973. *Pathways to Tax Reform.* Cambridge, Mass.: Harvard University Press.

Whitehouse, E., 1999. "The Tax Treatment of Funded Pensions". World Bank, Social Protection Discussion Paper No. 9910.

Figure 6: Direct Expenditure on Social Insurance and Social Assistance Pensions and Tax Expenditure on Occupational Pensions, 1980-97

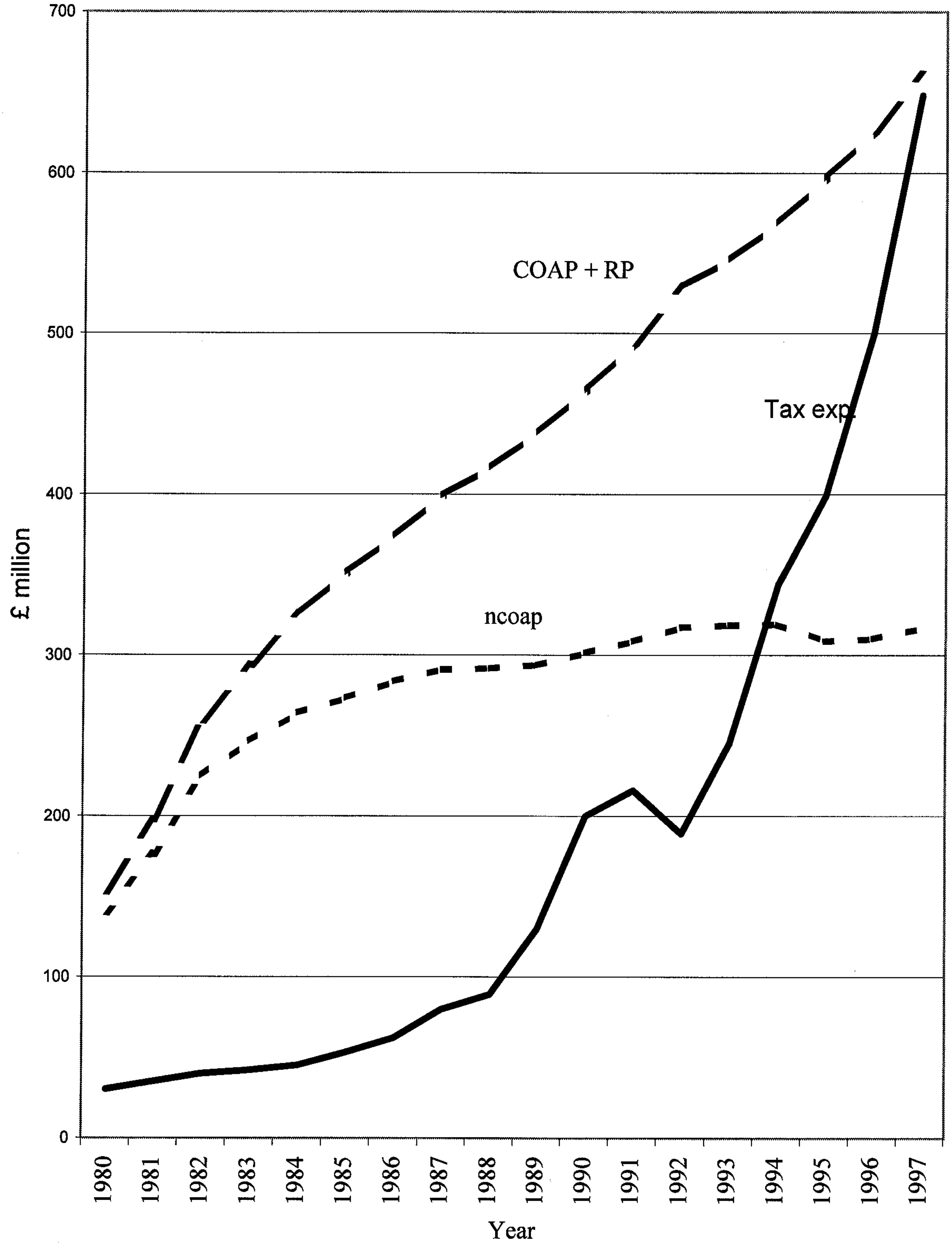

Figure 7: Tax Expenditure on Occupational Pensions as a Percentage of Direct Expenditure on Social Welfare Pensions, 1980-97

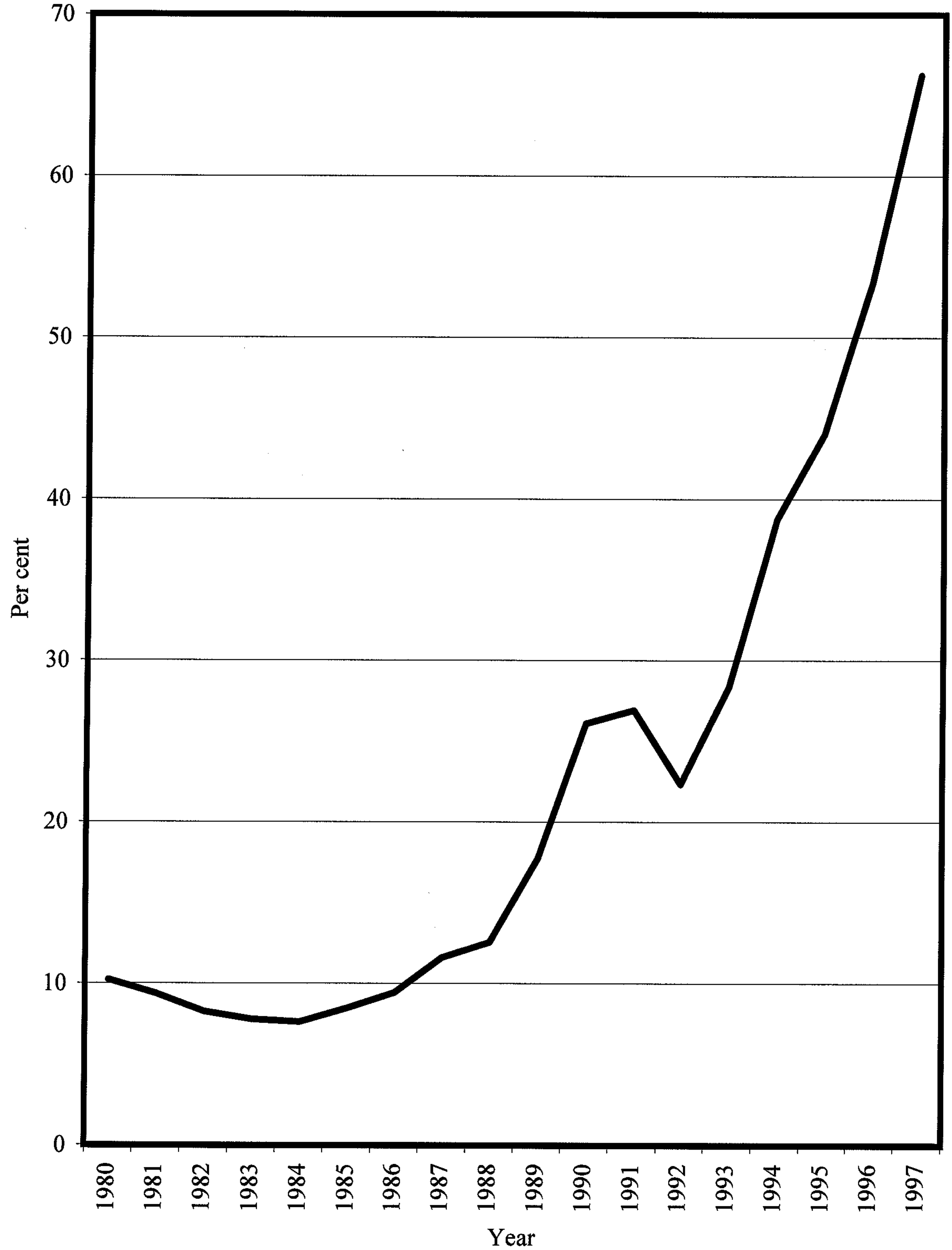

Figure 14: Distribution of Pension and Insurance Income Subject to Tax in the U.K. (1986/87) and the U.S.A. (1988)