

COMPANY TAX – EFFECTIVE TAX RATES ON PROFITS

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1 INTRODUCTION

Considerable controversy surrounds the measurement of profit in company accounts. Continuous inflation has underlined some of the problems involved. Current accounting practice in the United Kingdom and Ireland also obscures the amount of direct tax that companies pay. Kay and King (1980, p. 193) comment that the “effect of this accounting practice is that many companies, especially in manufacturing industry, show substantial tax charges in their accounts when in fact they are paying little or no tax at all”. A similar comment applies to Irish companies as accounting standards in Ireland follow closely those in the United Kingdom. In addition, many features of United Kingdom Finance Acts are incorporated into subsequent Irish Finance Acts. A combination of differing or controversial measures of profit and obscure reporting of tax paid makes the calculation of tax rates on profits for the corporate sector a difficult if not arbitrary process.

This paper attempts to estimate effective direct tax rates, calculated from published accounts of Irish companies, during the period 1964-79. An estimate of direct tax payments by companies may not be the same as an estimate of the incidence of direct tax on companies. This is because companies may be able to shift the burden of tax through higher prices on their products, so that the consumers of these products ultimately end up paying the tax. In other words, the formal incidence of a tax may not be the same as the effective incidence. Indeed many economists would agree with Kay and King (1980, p. 10) that in the long run the formal incidence of a tax is irrelevant to its effective incidence. The same may not be true in the short run. The traditional argument as stated, for example, by Kaldor (1956, p. 14), was that to the extent that firms maximise profits the formal incidence is equal to the effective incidence. Others have argued that oligopolistic behaviour rather than competitive behaviour is more normal in a modern economy. Hence, the introduction of a profits tax may result in a general rise in prices. King (1977, p. 248) argues that the incidence of corporate tax in an economy dominated by oligopolies depends on a number of complex factors, such as the determinants of corporate investment, and is difficult to estimate. There have been a number of empirical investigations of the extent of short-run shifting of corporation tax, not all of which are in agreement as to the extent to which short-run shifting takes place. For example, Dusansky (1972) con-

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cludes that there is 100 per cent corporate tax shifting in the USA while Oakland (1972) found no evidence of short-run shifting of corporation tax in the USA. Both studies relate to similar time periods. A study by Davis (1972) found no evidence of short-run shifting of corporate taxes in the United Kingdom. Prest (1975, p. 361) concludes that the opportunities for short-run shifting are much less in a relatively open economy, such as the United Kingdom, than in the United States. A similar argument can be applied to the Irish economy.

Irrespective of the degree of shifting which may occur, the formal incidence of a tax is still useful in examining various aspects of the corporate sector, for example, the absolute amount of corporate retentions, and hence, corporate saving. The formal incidence of a tax becomes even more useful in analysis of the effects of taxation, if there is little or no shifting of corporate taxes.

The paper begins with a brief description of the structure of company taxation in Ireland, and factors that have influenced this structure. This is followed by a description of companies included in the study. Some estimates of effective direct tax rates are then presented and this is followed by an examination of the effects of inflation, and the distribution of tax rates amongst companies in the study. Finally, tax payments by the corporate sector as a whole are examined, and some comparisons are made with other countries.

2. *THE CORPORATE FISCAL SYSTEM IN IRELAND*

Since the formation of the State in 1922 until 1976 company profits in Ireland were subject to an income tax and a corporation profits tax, using an imputation system (Dept. of Finance, 1973, ch. 3), which was largely neutral in relation to the tax rate on retentions versus distributions. In 1976 a single corporation tax was introduced (Revenue Commissioners, 1976). In 1981 the corporate tax rate for manufacturing companies was reduced to 10 per cent, although it was proposed that distributions to Irish shareholders be taxed at a higher rate. The corporate tax rate would be 45 per cent for all other companies.

In considering the structure of the current fiscal system in Ireland it is useful to divide the company sector into a domestic and an international component; the main distribution being that the domestic component, which may be indigenously owned and controlled, trades largely in the domestic economy, while the international component, consisting in this case mostly of subsidiaries of multinational firms, broadly defined (United Nations, 1974, p. 3), trades largely in the international economy. For various reasons multinational firms may react to fiscal incentives in a different way than domestic firms, for example, the ability to switch profits from country to country using transfer pricing (Stewart, 1977). In addition, in Ireland there are various fiscal incentives specifically designed to influence the location decision of these firms, the most important of which are capital grants for new investment and tax relief on exports. The level of such incentives is considerably influenced by inter-county competition for international investment.

It is difficult though to exclude domestic firms from the benefits of incentives designed largely to attract international enterprises, as there is a marked tendency for a fiscal incentive designed for one particular sector or area, to diffuse gradually throughout the economy. Joel (1971) describes this process of diffusion of fiscal incentives for Central American countries, and also gives some reasons why this occurs, which appear equally valid for more developed countries, for example "lobbying by affected interests" and the difficulty of formulating "meaningful criteria" to limit the scope of tax exemptions.

Hence, fiscal incentives which were initially introduced to stimulate exports and to attract foreign capital have been extended throughout the manufacturing sector, and to a reduced extent, the services sector. For example, tax relief on profits from exports was

first announced in the form of a 50 per cent reduction in tax on profits from increased exports, provided these profits were retained within the firm (Dáil Debates, vol. 160, p. 1614). Hence, as initially conceived export tax relief was a differential profits tax, which was only of benefit to firms that retained their profits from exports. This measure was criticised when introduced for not being generous enough, particularly when compared with incentives to exports offered in other countries. For example, Séan Lemass, then in opposition, stated (Dáil Debates, vol. 160, p. 1628):

It is quite clear that if the Government is hoping through this measure to arouse significant foreign interest in Irish industrial possibilities, they are not going far enough.

At the same time Lemass recommended amending the Control of Manufactures Acts which attempted to discriminate against foreign ownership of manufacturing firms.

A change in Government in 1957 allowed these proposals to be put into effect. The Budget Statements for 1957 and 1958 announced increased tax allowances on profits from exports. For example, the Budget Statement for 1958 states:

To give an added impetus to the expansion of exports and a further encouragement to both home and foreign industrialists to build, extend and equip factories within the next few years to manufacture for export, I propose to lengthen from five to ten years the maximum period of the 100% exemption for new or increased exports.

It is important to note that by this time, tax relief was granted whether profits from exports were retained or distributed; secondly, the extension of the period as well as the size of the tax reliefs granted; and thirdly, that while export tax relief was available to both foreign and Irish-owned firms, the major beneficiaries were naturally exporting firms, which were largely foreign owned. It is likely that this result was anticipated, and was facilitated by the partial dismantling of the Control of Manufactures Acts in 1958, and their repeal in 1964. In proposing an amendment to the Control of Manufactures Acts, Lemass stated (Dáil Debates, vol. 165, p. 534):

... one of the main reasons for preparing and introducing a Bill to amend the Control of Manufactures Act is to advertise as widely as possible that foreign investment in industrial development involving export trade is welcomed and will be facilitated.

The Budget Statement in 1956 in response to a recommendation by the Committee of Inquiry into Taxation on Industry (Department of Finance, 1956, pp. 79-80) announced the introduction of additional allowances for depreciation, and most Budget Statements since then have announced increases in these allowances. The Budget of 1967 was the first to introduce 100 per cent allowances which were initially limited to the "designated areas" but were subsequently extended to the country as a whole in 1971. The general reason for increasing depreciation allowances was to increase investment. For example, the Budget Statement of 1967 states:

As a specific encouragement, however, to higher investment in manufacturing industries and an improvement in our competitive position in free trade conditions, I propose to raise to 50% the initial allowances of 40% which applies to capital expenditure incurred in the period up to 31st March 1968 on new machinery and plant.

The major part of foreign investment in Ireland consists of subsidiaries of firms operating in other countries, and because most output is exported, profits are largely exempt

from tax. Hence, depreciation allowances have little or no effect on their tax payments. Companies trading largely in the domestic economy do not benefit to the same extent from export tax relief, and so depreciation allowances may be used to reduce tax payments. In addition, some domestic companies have developed considerable exports,¹ and tax exemptions similar to those on exports have been granted to certain companies in the services sector.

Leasing has spread the tax savings from accelerated depreciation allowances to non-manufacturing companies, such as financial companies and banks. For this latter group of companies, leasing may not necessarily result in an increase in pre-tax profits, as this depends on the distribution of benefits between the lessor and lessee, but it is certain to result in lower tax payments, and probably higher post-tax profits, depending on the distribution of tax savings between the lessor and lessee.

A number of ways of providing finance to the manufacturing sector has also developed, the returns on which (interest or dividends) are either tax free or taxed at a reduced rate: for example, preference share financing and "section 84 loans".² These schemes reduce the cost of capital to the manufacturing sector, but they also result in lower tax payments by the provider of finance. It is doubtful that these schemes were initiated by the State, but more likely represent an unplanned diffusion of tax incentives.³

Finally, capital grants were first introduced as an incentive to investment in certain "designated areas" in 1952, and were subsequently extended to the rest of the country in 1956. Since the general introduction of capital grants, the proportion of fixed investment financed by grants has been increased as well as the range of expenditures that are eligible to receive a grant (Appendix, Table 1).

In summary, the company sector may currently avail of two main types of fiscal incentive: those incentives which are of most benefit to foreign direct investment, though domestic firms are not excluded, that is exemption from corporation tax on any profits earned from exports and grants for capital expenditure on "new industry". From 1981 corporation tax on manufacturing companies is at a reduced rate of 10 per cent. Companies established before January 1981 had the option of choosing to retain the benefits of export tax relief, or of being taxed at a nominal rate of 10 per cent. Companies which choose to be taxed at 10 per cent may not subsequently benefit from export tax relief. Secondly, investment incentives which are of most benefit to domestic companies, consisting of various depreciation allowances, including accelerated depreciation (Department of Finance, 1973, pp. 22-44) and capital grants for "re-equipment". Since 1975 manufacturing companies and certain other companies may claim tax relief on stock profits, and since 1977 a reduced rate of tax applies to firms which increase their employment. Domestic companies engaged in manufacturing also benefit from reducing the rate on "manufacturing companies" to 10 per cent, although it is proposed that distributions to Irish shareholders will be taxed at a higher rate. Appendix Table 1 summarises some of the more important fiscal incentives and tax reliefs available during the period 1964-79.

1. Some companies have been reported as exporting in order to gain tax relief and have an Irish distributor reimport the goods (*Irish Times*, 22/12/78).
2. For a brief description of both see Central Bank of Ireland (1980).
3. "Section 84 loans" are a good example of this process. These loans refer to section 84 (2d) of the Corporation Taxes Act, 1976, which is identical to an anti-tax avoidance provision contained in an earlier United Kingdom tax act, section 233 (2d) of the Income and Corporation Taxes Act, 1970. In the UK Act this section was designed to ensure that profits of companies which were distributed as interest payments rather than dividends were treated for tax purposes as distributions of dividends. In Ireland, however, this measure led to interest payments by companies whose profits were tax exempt because of export tax relief, being treated as a dividend distribution, and hence tax free to the recipient. Subsequently, companies paying no or reduced tax because of depreciation allowances also issued "section 84 loans".

Numerous other grants and tax reliefs also apply to the corporate sector. Some of these are described by NESO (1975, appendix 1, Table A1), or in Department of Finance (1973, p. 24).

3. THE SELECTION OF FIRMS IN THE STUDY

All companies in the private sector in Ireland may be classified as public or private. The most common distinction between a public and a private company is that a private company cannot have more than 50 shareholders. The Irish Companies Act (1963), which is almost identical to the 1948 Companies Act for the United Kingdom, requires all public companies to file a Balance Sheet and a Profit and Loss Account with the Registrar of Companies. These documents are then made available for public inspection. During the period 1964-79 the number of public companies fell from 396 to 339.⁴

This population was used to select firms for the study by excluding: (i) non-trading companies, (ii) financial and investment companies, (iii) State-owned companies; (iv) wholly-owned subsidiaries, (v) subsidiaries of other public companies included in the study,⁵ and (vi) small companies, that is companies with a turnover less than £1 million, or fixed + net current assets + short-term borrowing less than £0.5 million in 1979. Lower cut-off points were used for earlier years. Two other companies (Alliance and Dublin Gas and the Cork Gas Company), although not incorporated under the 1963 Companies Act, were also included from 1975 on, when their accounts were standardised with those of public companies. One company was omitted for the period 1976-79 (Smurfits) and one for 1973-79 (R.T.D. Group). In the case of Smurfits sales within Ireland amounted to less than one-third of total sales and production within Ireland fell from approximately half of total production to one-third of total production in the period 1976-79, while most of the production and sales of the R.T.D. Group were in the United Kingdom in the period 1973-79. Hence, tax payments for these two companies are largely determined by factors other than the Irish fiscal system.

The study population thus consists of non-financial, Irish or partially Irish-owned companies in the private sector. In some cases multinational companies owned a majority of the ordinary shares, but in no case was output totally exported or supplied to an affiliate. All the companies included in the study are listed in the appendix.

Data was obtained from the published accounts of these companies for the period 1964-79, 1964 being the first year of operation of the Irish Companies Act (1963). Ireland operates on an April-to-April fiscal year and companies may choose their own accounting year end date. So the following rule of thumb was used in allocating company accounts to different year end dates. A company whose accounting year ended between January 1 and June 30 was attributed to the preceding calendar year, and a company whose accounting year ends between July 1 and December 31 was attributed to the current calendar year.⁶ During the period under study, an increasing proportion of

4. Source: *Companies General Annual Report* for 1964 and 1979, Department of Industry and Commerce, Dublin.
5. In two cases subsidiaries of other public companies were included and the parent excluded. In one case (Thwaites), this was due to extensive operations in the UK by the parent (E. & J. Bourke) and in the other (Associated Properties) due to the absence of consolidated accounts with the parent company (Estates Development) until 1975, at which point the parent was included. One company was omitted entirely, because statutory requirements in relation to disclosure were not complied with (South of Ireland Asphalt Company).
6. Adopting the Department of Industry convention for the UK (King, 1977, p. 278) would result in almost the same allocation of firms to different calendar years. See also Singh and Whittington (1968, appendix A) for a comprehensive account of this convention, and the problems encountered in handling data of this type.

companies in the study ended their accounting year on December 31. For 1979, 49 per cent of the companies included, representing 58 per cent of pre-tax profits, ended their accounting year on December 31.

The population of non-financial companies has changed considerably during the period 1964-79, as a result of new public companies, mergers, takeovers and liquidations. During the period 1964-79, 51 of the companies included in the study either merged with, or were taken over by, other companies. Thirty companies were taken over or merged with existing public companies. Seventeen companies went into liquidation or had receivers appointed. There were 19 new public companies.

The companies in the study employed about 64,700 persons in 1978, approximately 7.0 per cent of the non-agricultural labour force for 1978.⁷ Throughout the study period, an increasing proportion of firms were engaged in manufacturing activities. For 1979, out of a total of 77 companies included in the study, only 10 companies appeared not to engage in some manufacturing activity. Two of the ten companies were retail stores, two were involved in hotels and travel, two in property, two in hardware merchandise, and one each in vehicle distribution, and auctioneering. The largest single grouping by sector was in textiles, with 12 firms. Many firms during the period studied diversified into other manufacturing sectors, and in some cases from manufacturing into distribution (e.g., Waterford Glass). Similarly, some firms engaged in non-manufacturing activities diversified into manufacturing activities (e.g., Arnotts).

4. EFFECTIVE DIRECT TAX PAYMENTS

This section describes how tax payments are measured, secondly some differing concepts of profit are described, and finally an estimate of effective direct tax rates is presented. Tax payments are estimated on a cash paid basis, and are called "cash tax payments" to differentiate them from the tax charge in the Profit and Loss Account. The tax charge in the Profit and Loss Account includes deferred tax due to accelerated depreciation, stock relief, etc., and also makes no allowance for lags in the collection of tax. Accelerated depreciation results in a portion of the tax charge, equal to the allowance for accelerated depreciation to be deferred until some future period, thus resulting in a considerable divergence between the tax charge in the Profit and Loss Account and "cash tax payments". Recent accounting changes have reduced this discrepancy to a considerable extent for depreciation allowances but not for other timing differences.⁸

Lags in the collection of company tax in Ireland arise because these taxes are collected in arrears (Revenue Commissioners, 1976, pp. 14-15). In the United Kingdom the introduction of Advanced Corporation Tax reduced the lags somewhat, but no attempt was made to reduce lags in corporate tax payments in Ireland until 1981, when it was proposed in the Budget Statement to reduce the statutory lag in the final payment of corporation tax by three months, resulting in final payment of corporation tax 1 to 1½ years after the accounting year end. There is also, as Bird (1970, p. 60) points out, a considerable incentive for firms to delay tax payments in periods of inflation, as their real value is continuously eroded. In order to reduce these delays, overdue tax payments in Ireland the UK may be subject to an interest charge.

Since 1976 all companies include with their accounts a statement of sources and

7. The figure of 7.0 per cent is a slight overestimate as a number of firms have subsidiaries operating outside the Republic.

8. See Institute of Chartered Accountants in Ireland, 1977, *Accounting for Depreciation*, SSAP no. 12.

applications of funds,⁹ and some companies did so before 1976. "Cash tax payments" are generally shown in such a statement. Where the figure was not shown in a statement of sources and applications of funds, the amount was estimated according to the following procedure. An increase in Balance Sheet tax liabilities (deferred, future, and current tax) was deducted, and a decrease in Balance Sheet tax liabilities was added, for each accounting period to the tax charge as shown in the Profit and Loss Account. An increase in future tax arising from revaluations was excluded from the calculation, as profits from revaluations are also excluded from pre-tax profits in company accounts. Tax charges attributable to associated companies were also excluded from the calculation, as such payments involve no cash outflow by the parent company. Generally, a "cash tax payment" which is lower than the tax charge in the Profit and Loss Account results in an increase in Balance Sheet tax liabilities, and a "cash tax payment" which is greater than the tax charge in the Profit and Loss Account is reflected in a reduction in Balance Sheet tax liabilities.

The following example using the Accounts for Clondalkin Mills Group for 1977, illustrates the divergence between taxation as shown in the Profit and Loss Account and "cash tax paid" and the process of estimating "cash tax paid". The 1977 Profit and Loss Account for Clondalkin Mills showed the following amounts for profits before taxation, and taxation:-

	1977
Profit before taxation	£2,836,903
Taxation	£1,093,705
	<hr/>
Profits after taxation	£1,743,198

Tax liabilities were shown in the Balance Sheet as follows:-

	1977	1976
Current Tax Liabilities	£1,422,469	£721,043
Deferred Taxation	£1,289,625	£1,298,800
	<hr/>	<hr/>
Total Tax Liabilities	£2,712,094	£2,091,843

Thus, there was an increase in total tax liabilities of £692,251. This increase in tax liabilities (tax owing but not yet paid) was deducted from the tax charge in the Profit and Loss Account resulting in "cash tax paid" of £401,454. This was the amount shown in the statement of sources and applications of funds, of tax paid, for 1977.

In a few cases, for example where firms merged or took over another firm, or where subsidiaries were sold off, this method could not be used to estimate "cash tax payments", and so firms were omitted for that year. All tax payable by the company on behalf of shareholders is included. As such, the "cash tax payment" is a combination of company tax payments, and personal tax payments collected by the company on behalf of shareholders. Tax payments may be higher than this amount depending on the proportion of shareholders who have marginal tax rates higher than the tax collected on their behalf by the firm, and lower depending on the number of shareholders who have marginal tax rates lower than this amount, for example, pension funds and charitable trusts. This procedure may be justified by the difficulty of identifying which portion of tax

9. See Institute of Chartered Accountants in Ireland, 1977, *Statements of Source and Application of Funds*, SSAP no. 10.

paid is due to precisely which tax provision, and because a division between the corporation and its shareholders may be of great legal significance, but is not necessarily of great significance in understanding corporate financial behaviour. Feldstein and Summers (1979) also stress the importance of "looking through" the corporation to suppliers of finance. In estimating the effects of inflation on corporate tax payments for the US they include tax payments by shareholders (on dividends and capital gains) and tax payments by lenders of finance. Lawson and Stark (1981) also focus on what is termed an "entity" concept of profitability (including interest payments) as distinct from an "equity" concept of profitability, that is profits attributable to shareholders, which is used in this paper.¹⁰

Capital gains tax was introduced for the first time in April 1974 at a rate of 26 per cent and was increased to 30 per cent in 1978. and because of the accounting treatment of capital gains tax, "cash tax paid" would include any capital gains tax paid by a company. The total amount raised by this tax came to £3.7 million, £8.0 million, £10.2 million, £8.8 million, and £12.4 million in 1975, 1976, 1977, 1978, and 1979, respectively. The amount attributable to companies in this study is likely to be negligible, because: (1) companies in this study constitute a small proportion of total assets liable to this tax: (2) companies may avoid this tax by reinvesting capital gains; and (3) since 1978, inflation as measured by the Consumer Price Index, may be offset against this tax. Hence, including this tax is unlikely to have much effect on the estimate of rates of tax paid on profits.

"Cash tax payments" are, however, defined to include tax paid by both the shareholder and the company and because the returns to shareholders may take the form of either distributions or capital gains via retentions, capital gains tax paid by both the company and shareholders should be included. There are no published estimates of receipts from capital gains tax on company securities, but as for tax on capital gains by companies in the study, the amount involved is likely to be low or negligible because of: (1) loss offset provisions, (2) share prices in Ireland, as in other countries, have not kept pace with inflation,¹¹ (3) since 1978 inflation as measured by the Consumer Price Index may be offset against this tax.

Four different definitions of profits are used in calculating tax rates on profits. All four definitions are measured *ex post*, that is, based on historical events. Hicks (1941, p. 179) argues such profit measures are of limited usefulness unless windfall gains or losses are excluded. To the extent that these profit figures include such windfall gains or losses, the profit figures presented may be of greater interest, as Hicks comments, to economic historians than to theoretical economists. The first definition is termed taxable profits. Taxable profits are profits before any allowances are deducted. As such they represent the maximum amount of profit which may be taxed if a firm in a position to claim any allowances, for example, a non-exporting firm, whose assets have been fully depreciated for tax purposes and with no capital expenditure which qualifies for tax

10. There are important differences between these two concepts. For example, unanticipated inflation causes a real transfer of wealth from lender to borrower. Inflation, even if anticipated, may also result in a real wealth transfer, for example, in cases of contractual saving, or where financial intermediaries operate in oligopolistic markets. That is, that the "Fisher effect" – nominal interest rates adjusting to reflect the rate of inflation plus the real rate of interest, may not hold. See also Cagan and Lipsey (1978, p. 34-48) for a discussion of saving and inflation.
11. Although this proposition depends on the choice of a base year. For example, from Dec. 1964 to Dec. 1980 the All Share Index as compiled by the CSO rose 2.95 times, whereas the Consumer Price Index rose by almost 5.1 times in the same period. From Dec. 1975 to Dec. 1980 the All Share Index rose 1.96 times and the Consumer Price Index 1.22 times. *Source: Irish Statistical Bulletin, and Economic Series, various issues, Dublin: CSO.*

allowances, during the period 1964-70. Taxable profits were measured as profits before tax plus the provision for depreciation, both as they appear in the Profit and Loss Account, because depreciation charged in company accounts, in contrast to accelerated depreciation, is not a tax allowable expense (Morley, 1974, p. 5; Inflation Accounting Committee, 1975, p. 199). The profits or losses, attributed to associated companies, were deducted for consistency with the measure of "cash tax payments". For more recent years a portion of capital grants received may be added to reported profits, and such amounts were also deducted in calculating taxable profits.

Investment income was included in the measure of taxable profits. Most companies had no investment income, and where reported was generally of small amounts; however, investment income is shown net of tax in company accounts, and as a result taxable profits are slightly overestimated.

Taxable profits as defined in this paper depart in several respects from an ideal concept of taxable income as described, for example, by Kaldor (1956, pp. 69-70). For example, taxable profits may overstate real profits because of inflation, and because no allowance has been made for depreciation, that is, the principle of maintaining capital intact, has been ignored. If true economic depreciation is deducted from taxable profits, that is, depreciation required to maintain the capital stock intact, an estimate of "pure profits" plus the return to share capital is obtained (Kay and King, 1980, pp. 173-175). This measure is termed share capital profits. Such an adjustment would be consistent with the notion of maintaining capital intact as described by Hicks (1942). More recently, the Meade Committee (1978, p. 31, definition A) also recognised this principle as being an essential aspect of any practical definition of income for tax purposes.

Depreciation as it appears in company accounts is used as an approximate measure of true economic depreciation in calculating share capital profits in this paper. However, depreciation as stated in the Profit and Loss Account is likely to understate true economic depreciation on plant and machinery, because real assets are likely to have increased in current money terms due to inflation. Hence, accounting depreciation is an inaccurate measure of true economic depreciation. Apart from the problems posed by inflation, there are other difficulties in measuring true economic depreciation: for example, the problem of estimating future capital values. For these reasons, Hayek (1935) suggested that all capital expenditure should be deducted in calculating profit, a procedure which is now widely used in calculating profits which may be assessed for tax, due to 100 per cent initial allowances.

A third definition of profits used in this paper is obtained by adding capital grants to taxable profits. This measure is termed gross available profits, and is the maximum cash flow which may be allocated by the firm without recourse to external financing. The final measure is obtained by adding capital grants to share capital profits, as suggested by Burgess and Webb (1974), and which is implicit in the Hicksian concept of income. This measure is termed net available profits.

From Table 1, which shows "cash tax payments" for companies in the study from 1964-79, was calculated the ratio of current "cash tax payments" to current taxable profits. This ratio varies considerably from year to year, but as Table 1 shows, has fallen from approximately 27 per cent in the earlier years to 11 per cent for more recent years. While this ratio is not an estimate of the rate of tax on "pure profit" or on the returns to share capital, it is nevertheless important in examining the effects of tax concessions, and likely changes in them. For example, the reasons causing this ratio to be low, or zero for individual firms, are also likely to make marginal tax rates low or zero, and additional fiscal incentives or increases in tax concessions may have little effect.

Calculating an effective tax rate as distinct from the ratio of current "cash tax payments" to current taxable profits is made more difficult because tax paid in year t may

Table 1: *Tax Paid, the Ratio of "Cash Tax Payments" to Taxable Profits, and Capital Grants Received, 1964-79*

£'000

Year	No. of Firms	Cash Tax Payments (T)	Taxable Profits (P)	T/P (%)	Annual Capital Grants Rcvd. (G)	Net Govt. Receipts (T-G)
1964	117	5,293	19,413	27.27	909	4,384
1965	120	4,752	19,785	24.02	1,383	3,369
1966	127	5,665	20,925	27.07	1,488	4,177
1967	128	6,413	22,716	28.23	2,145	4,268
1968	126	7,297	30,372	24.03	1,342	5,955
1969	123	6,574	31,961	20.57	3,351	3,223
1970	114	7,278	29,127	24.99	2,714	4,564
1971	114	7,347	34,374	21.37	2,783	4,564
1972	107	8,221	49,011	16.77	3,658	4,563
1973	101	8,239	73,933	11.14	3,248	4,991
1974	102	12,004	59,455	20.19	3,534	8,470
1975	97	7,920	42,943	14.96	5,688	2,232
1976	93	7,979	74,690	10.68	4,952	3,027
1977	87	12,843	89,146	14.41	3,851	8,992
1978	81	12,944	113,452	11.41	4,880	8,064
1979	77	13,494	139,288	9.69	3,561	9,933

be largely a function of profits earned in years t-1 and/or preceding years, and by the ability of firms to carry losses forward which may be offset against taxable profits in future years. Overcoming these problems would require a breakdown of the proportion of each year's "cash tax payments" which related to preceding year's profits, or alternatively the tax rate could be calculated over the entire life cycle of the firm. The true rate of tax would then be the discounted sum of future tax payments arising from current profits, to current profits, in the former case, and the ratio of the discounted sum of total tax payments to the discounted sum of total profits in the latter case.

In an attempt to take account of these factors an average of "cash tax payments" over varying definitions of current profits lagged one year was calculated for the periods shown in Table 2. For example Column (1) shows the ratio of current "cash tax payments" to taxable profits for three-year periods estimated according to:-

$$(T_t + T_{t+1} + T_{t+2}) / (P_{t-1} + P_t + P_{t+1}),$$

where T is the annual "cash tax payment" and P is taxable profits. Column (1), Table 2, shows that the rate of taxable profits paid in "cash tax payments" declined considerably over the period 1964-78. The difference between the statutory rate of tax (Appendix, Table 1) and these estimates of the tax rate indicate the amount of tax foregone as a result of various allowances.

If true economic depreciation is deducted from taxable profits, that is depreciation required to maintain the capital stock intact, the estimated tax rates would be higher. It may be the case, though, that other adjustments resulting from inflation would approximately counterbalance this effect. Some of the effects of inflation on company profits are explored in the next section. If depreciation as it appears in company accounts is

used as a measure of true economic depreciation, Column (2), Table 2, shows the estimated tax rate, using taxable profits less depreciation as the base. Column (2) illustrates the same trend of declining tax rates as Column (1).

Column (3), Table 2, shows the estimated tax rate if taxable profits plus annual capital grants received is used as the base. Finally, Column (4) shows the effect of subtracting accounting depreciation but adding capital grants to the tax base. These latter two measures are similar to those obtained using taxable profits, and share capital as the tax base, because capital grants are a small proportion of internal cash flows. All four measures of the tax rate illustrate a decline in tax rates over the period considered. Another way of looking at capital grants in relation to tax payments would be to subtract them from tax payments, thus showing the net effect on Government revenues (Table 1). This amount (T-G) though always positive, remained fairly stable in the period 1964-73 at £3 to £5 million, and fluctuated between £2 and £10 million in the period 1974-79, thus showing a substantial fall in real terms over the entire period. As not all tax revenue accrues to the Irish Government, as some companies have subsidiaries operating in other countries, this measure is an overestimate of Irish Government net tax receipts. Net receipts are, of course, further reduced by other forms of State support to the corporate sector, such as training grants and employment grants.¹²

If tax rates for the ten firms with no manufacturing activities in 1979 are considered, estimated tax rates are higher, but a downward trend is still evident. For example, the ratio of "cash tax payments" to taxable profits for the periods shown in Table 2 are: 37.69%, 38.19%, 32.33%, 36.86%, and 26.70%.

5. THE EFFECTS OF INFLATION ON CORPORATE PROFITS

Preceding sections have alluded to some of the distortions in company accounts resulting from inflation. This section discusses the effects of inflation on profits as conventionally measured, and hence the implications of adjustments for inflation on the estimates of the tax rate on profits (T/P). Secondly, the effects of inflation on company savings and liquidity are examined.

Inflation affects all aspects of company accounts but to different degrees and in

Table 2: *Estimated Tax Rates 1964-78*

	(1) T/P	(2) T/(P-D)	(3) T/(P+G)	(4) T/(P+G-D)
1964-66	27.99	38.76	26.34	35.65
1967-69	24.87	34.44	23.02	30.99
1970-72	21.16	28.63	19.57	25.79
1973-75	14.97	20.85	14.04	19.07
1976-78	14.17	18.67	13.50	17.53

Notes: T = "cash tax payments" D = accounting depreciation P = taxable profits
G = annual Government capital grant

12. Employment maintenance subsidies were first introduced in April 1978. For 1978 sixteen firms in the study received such subsidies. Fourteen firms disclosed the amounts received, and this came to £1.949 million for 1978. In 1979 fifteen firms in the study received subsidies of £2.849 million.

differing directions.¹³ The effects of inflation on company accounts as conventionally prepared, may for convenience be grouped in three areas:-

(1) Inflation affects the reported profits by understating certain costs, that is, depreciation and materials used. Depreciation is understated because the nominal value of all real assets of the firm have increased, but conventional accounting depreciation is calculated on the purchase price of assets. The cost of materials used is understated because they are valued at their purchase price, not their current value or their replacement cost. Reported profits might also be adjusted for changes (+ or -) in the finance required for the monetary working capital of the business (trade debtors and trade creditors), due to inflation (Institute of Chartered Accountants in Ireland, 1980).

(2) Inflation affects the Balance Sheet by increasing the values of all real assets and reducing the value of monetary liabilities. This results in what are termed holding gains. Holding gains may be larger than the general rise in prices, and thus may be real capital gains, for example, in the case of land and buildings, or may be smaller than the general rise in prices, resulting in real capital losses.

(3) Because of (2), shareholders as residual owners of the firm's assets make capital gains, termed monetary gains, at the expense of the owners of monetary liabilities, for example, owners of longterm debt, and various creditors such as the Government.

For more recent years a number of companies included in the study have published profit figures adjusted for inflation.¹⁴ For six companies which publish such adjusted profits, total pre-tax profits for 1979 amounted to £19.928 million as conventionally measured, and £14.426 million when adjusted for inflation. However, there are various methods of adjusting accounts for inflation, for example, the value of assets may be estimated in different ways.

Inflation-adjusted profits as currently published include only part of the monetary gain accruing to shareholders as income. It is likely that inflation-adjusted profits, which included as income the total monetary gain to shareholders, which results from monetary liabilities being reduced in real terms, would result in higher profit figures than the inflation-adjusted profits which are currently published. Hicks (1941, p. 172) defined income "as the maximum value which a person can consume during a week, and still expect to be as well off at the end of the week . . . as at the beginning". It would be consistent with this definition of income or profit, to also include in profit, the excess of holding gains attributable to ordinary shareholders, over the general rise in prices.¹⁵

13. See Morley (1974) for a comprehensive discussion of the effects of inflation on assets and liabilities. The Inflation Accounting Committee (1975), describes how assets and liabilities might be adjusted for inflation, especially ch. 12 and 13.
14. That is: Carroll Industries, Irish Distillers, Maguire and Paterson, Merchants Warehousing, Peterson Tennat and T.M.G. These adjusted profit figures are prepared in accordance with the Institute of Chartered Accountants in Ireland Statement of Standard Accounting Practice No. 16, (similar to the proposals of the Hyde Committee). All companies above a certain minimum size will be required to prepare such adjustments in future years.
15. For example, a firm could make real capital gains resulting from the appreciation in value of land and buildings. These real capital gains could be realised and the firm could relocate in an area with lower land and building values. It might be argued that such real capital gains, or real holding gains should be included as part of income, only if the fundamental nature of the business is not changed by realising them. However, such real holding gains increase their owners' potential for

Moore (1980) shows the effects on profits of non-financial companies in the United Kingdom for 1961-77 of various adjustments for inflation.¹⁶ After-tax profits which were fully adjusted for inflation, that is as well as recognising additional costs, also include the full monetary gain and real holding gains or losses attributable to shareholders' net worth, were found to be about 10-15 per cent below post-tax profits as conventionally measured. For three of the years 1970-77 fully adjusted profits were greater than reported profits. Modigliani and Cohn (1979) also argue that the real profits of non-financial corporations in the US have not fallen when adjusted for inflation, but are best described as trendless. The conventional view of a falling profits trend results from treating interest payments as an expense, rather than partly an expense and partly a repayment of debt. This is because inflation reduces the real value of debt, and so interest payments may be viewed partly as repayment of debt.

Two companies in the study (Peterson Tennant and Carroll Industries) publish estimates of the value of real assets adjusted for inflation as well as profits. Table (3) reproduces some of this information.

From Table (3) it can be seen that the monetary gain (Column 6) is of similar magnitude to the additional costs which must be recognised when adjusting profits for inflation (Column 3). Hence, inflation-adjusted profits defined as conventionally defined profits (Column 1) minus additional costs (Column 3) plus the full monetary gain (Column 6) are closer to pre-tax profits as conventionally defined, than the inflation-adjusted profits as published (Column 2), and if real holding gains, (should there be any,) were included the difference would be narrower still. The reason for the difference between inflation-adjusted profits as published and inflation-adjusted profits as defined in Column (7) is that the former while deducting in full additional costs, includes only part of the monetary gain accruing to ordinary shareholders. This partial monetary gain is calculated by multiplying additional costs (Column 3) by the ratio of debt to Column 5 (debt + shareholder funds). This sum is then added to pre-tax profits (Column 1) minus additional costs (Column 3). Whereas the full monetary gain (Column 6) is calculated by multiplying the increase in the value of assets (Column 4) by the gearing ratio (Column 5).

Adjusting profits as conventionally defined, for inflation raises various issues in relation to taxation. Modigliani and Cohn (1979) argue that while corporations are taxed on reported profits and not real profits, they are allowed to deduct total interest payments on taxable profits even though part of these interest payments are really repayments of debt. On average it is claimed, these two effects largely cancel out for the corporate sector as a whole, although this may not be true of individual firms.

A similar argument applies to taxation on reported profits as compared with taxation on inflation-adjusted profits. In the absence of accelerated depreciation allowances and stock relief, reported profits are overstated and so effective tax rates are higher. However, monetary gains or real holding gains which accrue to shareholders are not included as part of taxable income. Such gains for the corporate sector as a whole, are likely to result in real profits being of similar magnitude to conventionally defined profits. As Modigliani and Cohn (1979) say, "the tax system in effect taxes what should not be taxed and does not tax what should be taxed".

In contrast, Feldstein (1980) states that inflation in the US has resulted in a higher

future consumption, while maintaining the value of capital intact, and as such would constitute part of income in the Hicksian sense. Kaldor (1956, p. 68-69) argues that real capital gains whether anticipated or not should be treated as part of taxable capacity. Profits might also be adjusted for capital gains or losses resulting from interest rate changes, although interest rate changes may not only be due to inflation (Cagan and Lipsey, 1978, pp. 1-16).

16. See also the criticism of Moore (1980) by Lawson and Stark (1981), the reply by Moore, and comments by Wiles in *Lloyds Bank Review*, January, 1981.

Table 3: *Some Effects of Inflation on Company Accounts*

£'000

Year	Pre-Tax ¹ Profits (1)	Profits ² Adjusted for Inflation (2)	Additional ³ Costs (3)	Increase in ⁴ Value of Assets (4)	Gearing ⁵ Ratio (5) (%)	Monetary ⁶ Gains (6) (4x5)	Inflation Adjusted Profits incl. Monetary Gain (7) (1-3+6)	
Carroll	1980	7368	6440	1091	3970	14.9	592	6869
Industries	1979	5409	4714	904	2830	23.1	654	5159
	1978	4774	3964	1175	3355	31.1	1043	4642
	1977	4733	3210	2401	3365	36.6	1232	3564
Peterson	1976	6657	5198	2687	4715	45.7	2155	6125
	1979	1115	877	301	339	20.9	71	885
Tennant	1978	918	754	258	396	36.4	144	804

¹Defined as historical cost profits as reported, less profits of associated companies and capital grants credited to income.

²Defined as profits adjusted for inflation using Statement of Standard Accounting Practice No. 16, less profits of associated companies and capital grants credited to income.

³Largely consisting of additional depreciation charges and additional costs of materials used. An allowance for the change in monetary working capital (trade debtors – trade creditors) due to inflation is also included for each year, except 1976, but is only significant for Carroll Industries for 1980, when it was +0.336 £million. This gain occurred because monetary liabilities were greater than monetary assets resulting in a real gain to the firm. Moore (1980) found that the aggregate monetary working capital adjustment for UK firms was negative for 1961-74 and positive for 1975-77.

⁴Defined as the increase in the Capital Maintenance Reserve, or the Current Cost Reserve in Accounts adjusted for inflation plus the gearing adjustment.

⁵The ratio of debt to (debt + shareholder funds). Because of differences in the accounting treatment of deferred tax this ratio may not be strictly comparable between firms. Deferred tax allowances for any one year are also subject to revision.

⁶Defined as the increase in the value of assets multiplied by the gearing ratio.

effective rate of corporate tax because of (a) historic cost depreciation, and (b) a "tax on artificial capital gains caused by inflation". However, as Moore has demonstrated for the UK and which is also likely to be true for companies in this study, the effects of historic cost accounting are compensated by holding gains and real capital gains. Secondly, tax payments as defined in this study include tax on capital gains paid by companies, and as argued previously capital gains tax paid by equity shareholders is likely to be negligible.

Inflation results in large transfers of real wealth between different economic units.¹⁷ It is generally accepted that the corporate sector should take account of these real wealth transfers in measuring profits. It is less widely accepted that these real wealth transfers should be taxed.

Inflation-adjusted profits may not be very different from profits as conventionally defined; inflation though has other effects on the corporate sector. One of these effects, that is the effect of inflation on corporate liquidity, has received considerable attention, and led to the introduction of stock relief, that is tax allowances relating to the increase in the value of stocks during an accounting period, in the UK and Ireland. Kay and King (1980, p. 171) comment that the effect of this relief with other tax allowances "was to eliminate the corporate tax liability of U.K. manufacturing industry". A similar result has largely followed in Ireland, and hence it is worth examining the conditions which gave rise to a reduction in corporate liquidity, and the subsequent granting of stock relief.

Table 4, Column (5) shows an estimate of profits available for distribution, or "free profits" for firms in the study for the period 1972-79 when an adjustment is made for an increase in the value of stocks due to inflation.¹⁸ Distributable profits were estimated by subtracting accounting depreciation (D), cash tax paid (T), and a stock adjustment (S) from taxable profits (P). As taxable profits (P) are almost identical with gross internal cash flow,¹⁹ this measure is termed distributable profits, that is profits available for distribution as dividends, repayment of liabilities, expansion of assets, etc.

Table 4, Column (5) shows that distributable profits fell substantially in the period 1974-75, coinciding with a period of high inflation.²⁰ The corporate sector thus faced a considerable reduction in liquidity, and one of the responses was to reduce corporate tax payments by granting stock relief to manufacturing firms. It is important to note that real profits, which included real holding gains attributable to shareholders, and monetary gains may not have fallen, or may have fallen by a small amount.

Alternative responses to relieve this liquidity crisis were possible, and may have been used by some firms; for example, realising capital gains, which may not always be possible in the short run, particularly as high inflation coincided with a period of recession, or as argued by Modigliani and Cohn (1979) increased borrowing. Modigliani and Cohn argue that because the corporate sector has in real terms repaid debt, or reduced gearing (the

17. Although as noted by Bach and Stephenson (1974) in a study relating to the US these redistributive effects may be quite complex. See also Nowtony (1980) for a review of the effects of inflation and the tax system on resource allocation.
18. The stock adjustment was estimated by totaling year end stocks of raw materials, goods in process, etc., as they appear in the Balance Sheet, and deflating this sum by the annual rise in the Wholesale Price Index. This is a crude estimate of the change in the value of stocks as no allowance has been made for physical changes in stocks. Wholesale prices may also not be an accurate indicator of the rise in the price of raw materials and intermediate goods.
19. Taxable profits as defined in this paper do not include dividends received from associated companies, hence there is a slight difference between taxable profits and gross internal cash flow.
20. The percentage rise in the Consumer Price Index over the preceding year was 8.67, 11.37, 16.98, 20.86, 18.01, 13.63, 7.62 and 13.22 for the period 1972-79. Meeks (1974) has estimated that for the period 1967-72 in the United Kingdom 25.6 per cent of conventional profits were pre-empted in maintaining the physical volume of stocks.

Table 4: *Distributable Profits Adjusted for the Increase in the Value of Stocks Due to Inflation*

£ million

Year	N ¹	Taxable	Accounting	Cash Tax	Stock	Distributable
		Profits	Depreciation	Payment	Adjustment	Profits
		P	D	T	S	P-D-T-S
		(1)	(2)	(3)	(4)	(5)
1972	107	49.011	11.982	8.221	10.147	18.661
1973	101	73.933	15.207	8.239	22.235	28.252
1974	102	59.455	18.769	12.004	24.762	3.920
1975	97	52.943	18.520	7.920	36.151	-9.648
1976	93	74.690	18.923	7.979	36.618	11.170
1977	87	89.146	20.825	12.843	37.499	17.979
1978	81	113.452	27.160	12.944	24.474	48.874
1979	77	139.288	33.191	13.494	40.469	52.134

¹N is the number of firms.

ratio of debt to owners' funds) in periods of inflation, dividends have fallen in value in real terms, as internal funds were required to finance increased values of stocks and asset replacement. It is also likely that companies in this study reduced debt or monetary liabilities, or reduced gearing in real terms, thus pre-empting internal funds to finance increased values of stocks and asset replacement.

Comparing distributable profits (Table 4) with capital grants received (Table 1), it can be seen that capital grants are a much higher proportion of internally generated funds available for net investment, etc., than they are of gross internal cash flows (Taxable Profits, Table 1).

5. THE DISTRIBUTION OF TAX RATES

Before considering trends in tax payments for the corporate sector as a whole, and making some comparisons with trends in other countries, it is useful to consider the distribution of tax rates amongst individual companies. This is because the size distribution of firms is such that aggregated data will be dominated by the profits and tax payments of the larger firms. Table 5i shows a cumulative frequency distribution of the ratio of current "cash tax payments" to current taxable profits for firms in the study during the period 1964-79. One feature of this table is the increase from 12 per cent in 1964 to 59 per cent in 1979 of firms for which the level of current taxable profits paid in "current cash tax payments" was under 10 per cent. Some of this increase is due to an increased number of firms reporting losses in one or more of the years 1970-72 and 1974-78, and then offsetting these losses against taxable profits in subsequent years. A small number of companies appear to have tax already paid subsequently refunded, resulting in a net cash inflow. Similar rates of "cash tax payment" appear to exist in other countries.²¹ If share capital profit is used as the base, 7 per cent of companies in 1964 compared with 50 per cent in 1979 had a ratio of "cash tax payments" to share capital profits of under 10 per cent (Table 5ii).

21. Winkler (1977) cites evidence that 43 per cent of 115 of the largest British companies pay virtually no United Kingdom tax. Volvo, the Swedish car firm paid no Swedish corporate tax on profits of £43 million in 1974 (*The Times*, 1975). See also Kay and King (1980), pp. 193-194.

Table 5i also shows that in some cases the ratio of current "cash tax payments" to current taxable profits exceeds 50 per cent and in some cases 100 per cent. This occurs because current "cash tax payments" are largely based on profits in the preceding one or two year period. Hence, a fall in reported profits has the effect of increasing the level of "cash tax payments". Table 1 shows that a reduction in taxable profits, such as in 1973-74, for an almost identical population of firms, had the effect of increasing the overall level of "cash tax payments", thus adding to likely liquidity problems resulting from the decline in reported profits. Overall Balance Sheet tax liabilities may also be reduced for reasons other than a fall in profitability, for example, a decline in investment, and hence accelerated depreciation allowances, which would increase the level of "cash tax payments".

Because tax payments may be deferred by using accelerated depreciation allowances, or because of lags in the collection of tax, deferred tax liabilities are an important source of finance to the company sector in the form of an interest-free loan. As a result of these accrued tax liabilities (probably arising from a combination of rising profits and lags in the collection of tax) Lintner (1959, p. 185) found that the overall ratio of internal to external financing had shown little change over the period 1900-1955 for US non-financial companies, despite a decline in security issues.

6. AGGREGATE CORPORATE SECTOR TAX PAYMENTS IN IRELAND AND OTHER COUNTRIES

Aggregate data for taxable profits, or for share capital profits as defined in this paper, are not currently published. However, other aggregate information concerning the company sector is available. In addition to the firms in this study the company sector would include financial companies and banks, certain State-owned organisations, foreign-owned firms, and various private companies. Table 6 shows direct taxation of the company sector as a percentage of total tax revenue for the period 1955-57, and 1965-78. Table 6 also shows aggregate tax payments by the company sector, and aggregate capital grant payments to the company sector for 1965-78. Taxation payments are on a cash basis, but aggregate capital grant payments are only available on an accrual basis. Direct taxation of the company sector as a percentage of total tax revenue has declined considerably in recent years; concurrently there has been a trend towards higher payments of capital grants and other subsidies. Company direct taxation as a percentage of total tax payments fell from 8.8 per cent in the period 1955-57 to 7.52 per cent in 1965-67, and to 4.52 per cent in 1975-78. Capital grant payments rose from 31 per cent of tax payments in the period 1965-67 to 46.2 per cent of tax payments in the period 1975-78.

Table 7 shows the same data for the United Kingdom for comparative purposes. The table shows that company direct tax payments as a proportion of total tax revenue were higher for the UK in the period 1955-57, were generally lower than in Ireland for the period 1965-69, and then rose above the prevailing ratio in this country from 1971-78. However, the proportion of tax revenue returned to the corporate sector in the form of capital grants has tended to be consistently higher in Ireland than in the UK. Capital grants to public sector enterprises were excluded for the UK as such grants are of far less importance in Ireland.

Table 8 shows direct taxes on companies as a percentage of total current tax revenues for the OECD group of countries for the period 1955-57, 1965-67, and 1976-78. There are difficulties in making inter-country comparisons because, for example, the corporate sector is of varying importance in different economies, and because inter-country data may not be strictly comparable, for a variety of reasons. However, the table does illustrate that direct taxes on companies as a percentage of total tax revenue has declined in importance for most countries. Only two countries recorded an increase in this ratio between 1955-57 and 1976-78.

Table 5: *The Proportion of Taxable Profits (P) Paid in "Cash Tax Payments" (T)*¹ *Shown as a Cumulative Frequency Distribution, 1964-79*

<i>Tax Paid (%)</i>	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979 ²
≤ 0	4.3	4.2	4.8	4.1	4.1	11.7	6.7	10.9	15.5	24.0	26.2	17.8	22.7	17.8	20.0	18.2
< 10	12.2	13.4	13.8	10.6	17.1	22.7	16.2	24.8	34.0	44.8	44.0	43.8	58.7	47.9	57.3	59.1
< 20	29.6	31.9	30.1	22.8	37.4	42.0	52.4	43.6	53.6	65.6	57.1	69.9	73.3	61.6	70.7	75.8
< 40	77.4	75.6	70.7	65.9	76.4	92.4	71.4	74.3	76.3	90.6	79.8	91.8	97.3	90.4	90.7	89.4
< 60	93.0	93.3	89.4	87.0	94.3	96.6	93.3	89.1	88.7	99.0	90.5	94.5	100.0	95.9	94.7	97.0
< 100	97.4	98.3	95.9	97.6	100.0	99.2	100.0	95.0	95.9	100.0	94.0	97.3	100.0	98.6	98.7	98.5
No. of Firms	115	119	123	123	123	119	105	101	97	96	84	73	75	73	75	66

¹Calculated for only those firms with taxable profits.

²Some firms have been omitted as their accounts are not yet available.

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Table Siii: *The Proportion of Share Capital Profit (P-D) Paid in "Cash Tax Payments" (T)*³ *Shown as a Cumulative Frequency Distribution, 1964-79*

<i>Tax Paid (%)</i>	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979 ⁴
≤ 0	4.3	4.3	4.9	3.3	4.1	11.2	6.7	10.9	15.9	22.6	24.1	17.4	20.8	17.1	11.6	16.1
< 10	7.0	11.1	10.7	13.3	13.1	17.2	12.5	22.8	28.7	38.7	38.0	36.2	50.0	44.3	50.7	50.0
< 20	18.3	19.7	19.7	28.3	25.4	31.0	25.0	31.7	44.7	52.7	50.6	58.0	66.7	58.6	66.7	72.6
< 40	63.5	59.8	57.4	49.2	63.9	72.4	51.9	60.4	69.1	82.8	74.7	82.6	93.1	90.0	84.1	85.5
< 60	85.2	88.9	82.0	75.8	90.2	92.2	80.8	80.2	84.0	94.6	82.3	89.9	98.6	95.7	91.3	93.5
< 100	93.0	97.4	92.6	91.7	98.4	98.3	98.1	90.1	92.6	97.8	92.4	95.7	98.6	100.0	95.7	96.8
No. of Firms	115	117	122	120	122	116	104	101	94	93	79	69	72	70	69	62

³Calculated for only those firms with positive share capital profits.

⁴Some firms have been omitted as their accounts are not yet available.

P = taxable profits; T = cash tax payments; D = accounting depreciation.

Table 6: *Tax Paid and Capital Grants Received for the Company Sector in Ireland 1965-78*

Year	(1) Company Direct Taxation as a Percentage of Total Tax Revenue	(2) Amount Paid in Direct Taxation by Companies £m.	(3) Capital Grants Received £m.
1955-57	8.8	n.a.	n.a.
1965	9.06	22.62	5.9
1966	8.18	22.03	6.3
1967	7.04	22.28	8.6
1968	7.74	28.06	11.2
1969	7.94	34.05	18.7
1970	8.80	44.54	22.6
1971	6.09	36.49	30.2
1972	5.59	38.75	23.2
1973	5.56	46.85	19.0
1974	6.93	65.51	25.9
1975	4.83	57.74	35.3
1976	4.39	71.37	40.1
1977	4.10	77.72	37.2
1978	5.00	106.06	40.6

Sources: Columns (1) and (2), *Expenditure Trends in O.E.C.D. Countries 1960-80*, Table A10, O.E.C.D. Paris, 1972, and *Revenue Statistics of O.E.C.D. Member Countries 1965-1979*, Table 13, and Table 47, O.E.C.D. Paris, 1980.
Column (3), *U.N. Yearbook of National Accounts Statistics 1977*, Table 11, and 1976-78 was estimated from *National Income and Expenditure 1978*, CSO Dublin, 1980, Table A19.

Table 7: *Tax Paid and Capital Grants Received for the Company Sector in the UK for 1965-78*

Year	(1) Company Direct Taxation as a Percentage of Total Tax Revenue	(2) Amount Paid in Direct Taxation by Companies £m.	(3) Capital Grants Received (Private Sector) £m.
1955-57	15.5	n.a.	n.a.
1965	6.27	629	15
1966	6.02	717	21
1967	8.13	1002	235
1968	7.55	1103	438
1969	7.43	1178	573
1970	9.07	1732	514
1971	8.01	1613	586
1972	7.41	1592	402
1973	7.95	1845	364
1974	9.72	2844	349
1975	6.19	2326	509
1976	4.97	2198	377
1977	6.10	3087	277
1978	7.18	3987	472

Sources: Columns (1) and (2), *Expenditure Trends in O.E.C.D. Countries 1960-80*, Table A10, O.E.C.D. Paris, 1972, and *Revenue Statistics of O.E.C.D. Member Countries 1965-79*, Table 13, and Table 59, O.E.C.D. Paris, 1980.
Column (3), *U.N. Yearbook of National Accounts Statistics 1979*, Table 11, and 1975, Table 13.

Table 8: *Company Direct Tax as a Percentage of Total Tax Revenue for OECD Countries*

Country	1955-57	1965-67	1976-78
Australia	n.a.	15.42	11.40
Austria	6.9	5.15	3.30
Belgium	6.7	5.97	6.27
Canada	19.0	13.28	11.48
Denmark	5.6	3.73	3.34
Finland	12.6	7.53	4.30
France	6.4	4.99	5.29
Germany	9.3	6.88	5.33
Greece	2.0	3.63	n.a.
Ireland	8.8	7.52	4.52
Italy	5.9	6.9	7.32
Japan	17.9	18.04	16.85
Luxembourg	17.9	10.99	19.23
Netherlands	13.5	7.22	6.65
New Zealand	n.a.	20.74	10.61
Norway	9.9	3.73	4.66
Portugal	n.a.	n.a.	n.a.
Spain	20.7	9.76	6.15
Sweden	12.2	5.17	3.13
Switzerland	8.9	7.33	7.00
Turkey	n.a.	4.35	4.19
United Kingdom	15.5	6.49	6.17
United States	19.8	16.44	11.13

Sources: For 1955-57, *Expenditure Trends in O.E.C.D. Countries 1960-80*, Table A10, O.E.C.D. Paris, 1972. For 1965-67, *Revenue Statistics of O.E.C.D. Member Countries 1965-74*, Paris, O.E.C.D. 1976. For 1976-78, *Revenue Statistics of O.E.C.D. Member Countries 1965-79*, Paris, O.E.C.D. 1980.

King (1977, p. 45) comments that for most countries the ratio of tax to GNP has been rising over this period. O'Hagan (1980, Tables 9 and 10) has demonstrated the same trend for Ireland. This implies that direct taxation of the corporate sector has become relatively less important as a source of tax revenue. A decline in the proportion of company direct tax in total tax may be due to corporate tax rates falling, or remaining constant, while other rates rise, or are rising, but at a lower rate than other taxes, or it could be due to falling profit shares.

From the evidence presented in Table 2 it would appear that the fall in company tax as a proportion of total tax in Ireland is due to a fall in tax rates. King (1975, 1977, p. 46) argues that the same is true for the United Kingdom and for other countries (Germany, Japan, France and the United States) but that tax rates have not fallen by quite as much as in the United Kingdom.

Hill (1979, ch. 6) has examined rates of return and profit shares for the industrial and transport sectors for various countries for the years 1955-76. These sectors were used as a proxy for the non-financial corporate sector. The data were obtained from National Accounts, which as Hill (1979, p. 113) acknowledges may not be comparable between countries, particularly for estimates of the capital stock. In addition, the Wilson Report (1980, p. 585), for example, has drawn attention to the difficulties in estimating gross trading profits for the UK. These estimates are based on data provided by the Inland

Revenue, but because of stock relief and accelerated depreciation allowances, a large proportion of trading profits are not taxed, and often go unrecorded.

Hill found profit shares to be highest in Japan, Denmark, and Germany, and lowest in the United Kingdom, Sweden, and the United States, with Canada, Australia, Italy, and the Netherlands in an intermediate position. There was no evidence of a decline in profit shares for four countries, Canada, Japan, Australia, and Denmark, but quite strong evidence for the other countries examined. Hence for Canada, Japan, Australia and Denmark, a falling proportion of company direct tax in total tax must be largely due to a falling relative tax burden, assuming the non-financial corporate sector maintained its relative proportion of total corporate profits. For the United States and various European countries a fall in the proportion of company direct tax as a proportion of total tax may be due to a combination of falling profit shares and a fall in the relative tax burden, again assuming the non-financial corporate sector maintained its share of total corporate profits.

Comparative data for capital grant payments to the corporate sector are available for only some OECD countries, and generally no distinction is made between public and private sector enterprises. Hence, the means used to finance investment by public sector enterprises (e.g., capital grants versus loans) may invalidate inter-country comparisons. However, the data available reinforce the conclusion of a generally declining relative net tax burden for most countries examined, and an actual fall in net tax rates on corporate profits for some countries. For example, in the period 1976-78 capital grant receipts as a percentage of corporate tax payments were 144.4 per cent for Austria, and 12.1 per cent for Sweden.²² For the period 1965-67, capital grant receipts as a per cent of corporate tax payments were 63.7 per cent for Austria and 2.4 per cent for Sweden. In contrast, capital grant payments as a per cent of corporate tax payments fell in Finland from 7.22 per cent in 1965-67, to 1.2 per cent in 1975-78.

Finally, it can be seen from Table 8 that Ireland moved from 8th position in 1965-67 to 16th position in 1976-78 in a ranking of countries by the size of company direct tax payments as a percentage of total tax payments.

In summary, the corporate sector in Ireland appears to have one of the lowest levels of company direct taxation as a proportion of total tax receipts amongst OECD countries. It is also likely to receive one of the highest proportions of capital grants as a percentage of tax revenues, although comparable data are available for only a minority of OECD countries. These trends in Ireland may be partially explained by a growing proportion of export-oriented foreign firms in the total, which are tax exempt, and which may also receive higher capital grants. Furthermore, the trend in Ireland is likely to be one of a continuing reduction in the proportion of taxable profits paid in tax for the following reasons:

- (1) The extension of fiscal incentives to other sectors. For example, certain companies in the services sector have been granted tax exemptions similar to export tax relief. Firms that increase their employment have been granted lower rates of tax, and a general 10 per cent rate of tax was introduced in 1981 for manufacturing companies, although companies that distribute all their profits as dividends may pay a higher rate of tax; that is regarding the company and the shareholders as one tax paying unit.
- (2) Companies are likely to pursue a policy of diversification in order to benefit from various tax reliefs, particularly into activities that are classified as manufacturing. This may have favourable economic effects if diversification occurs through net investment, resulting in a net expansion of the capital stock, but diversification into manu-

22. Source: *United Nations Yearbook of National Accounts Statistics*, 1978 and 1970 for various countries.

facturing through merger or takeover may simply result in a reduction in tax yields, for example, by switching intra-company costs, with no overall expansion of output or of net investment.

(3) Leasing is likely to be used to a greater extent in the future, which will have the effect of extending depreciation allowances to companies other than those in the manufacturing sector and hence reducing their tax payments. The introduction of a 10 per cent rate of tax on manufacturing profits reduces the value of all existing fiscal incentives to manufacturing firms, and is likely to increase the use of leasing by non-manufacturing firms to reduce their tax payments. This is because firms in the manufacturing sector will be liable to reduced rates of tax, and hence will be unable to benefit from a higher proportion of depreciation allowances, for the same profit rate, and rate of investment in fixed assets; and

(4) for similar reasons demand for "section 84 loans" will also increase, and, in conjunction with the growth of leasing, will result in low or zero corporate tax payments by the banking sector.

7. CONCLUSION

Effective direct tax rates have declined considerably for the domestic corporate sector in Ireland during the period 1964-79. Thus, 59 per cent of the firms in the study that had positive taxable profits in 1979, paid less than 10 per cent of taxable profits in "current cash tax payments" compared with 12 per cent of firms in 1964. This proportion falls from around 50 per cent of firms in 1979 to 7 per cent in 1964 if an estimate of share capital profit is used as the base, that is if depreciation is deducted from taxable profits. It has also been argued that profits fully adjusted for inflation may not be very different from profits as conventionally defined. Hence, these conclusions remain valid, even if profits adjusted for inflation had been used as the base. The trend towards a declining tax rate is likely to continue due to the diffusion and deepening of various forms of tax relief throughout the corporate sector. These trends are indicative of the emergence of a corporate type economy as described by Winkler (1976; 1977) where the State may be a net provider of funds to the corporate sector.

Fiscal incentives, apart from reducing the overall rate of tax payments, have various other effects on the financial and real behaviour of the corporate sector. In addition, fiscal incentives, such as depreciation allowances, export tax relief, and a reduced corporate tax rate of 10 per cent, interact via double tax treaties with fiscal systems in other countries, and hence affect the ability of foreign-owned companies to benefit from various tax reliefs (Joel, 1971; Stewart, 1977). Investigating these effects would be outside the scope of this paper. However, one important implication of this study is that additional fiscal incentives which directly affect post-tax profits – for example, a reduced rate of tax for firms which increase their employment – may have little effect, as many firms already pay little or no Irish corporate tax. The only way additional tax exemptions to the manufacturing sector could have any effect, is indirectly through providing tax reliefs to suppliers of services, or labour, or other inputs such as energy. This, however, would result in a further erosion of the tax base.

DISCUSSION

John McKeon: In seconding the vote of thanks to Mr. Stewart, which has been proposed by Mr. O Broin, I would start by agreeing with his overall conclusion that the tax contribution of the corporate sector is low in Ireland as it is in most other countries. A major

contributing factor to this low level is the use of tax incentives – such as Export Sales Relief – in promoting the development of Ireland's manufacturing base.

Tax incentives are often criticised as a mechanism for encouraging industrial development because they are regarded as open-ended. They have two very important attractions for countries such as ours, however. They do not involve up-front Exchequer outflows which, in times of tight public finance, is a major factor. They also have the advantage of being most beneficial to successful companies which provide longer-term employment, thereby increasing income tax returns, contributions from social welfare and from expenditure taxes. For companies which do not become profitable there is, of course, no tax loss.

An interesting point which emerges from the paper is that the fall in the corporate tax contribution is not unique to Ireland. In Table 8 of the paper, the author points out that in Ireland, company tax as a percentage of total tax revenue has declined from 8.8 per cent to 4.5 per cent over the period 1955 to 1978. This represents a percentage decrease of 49 per cent. Surprisingly, however, the rate of decline has been sharper in developed countries where the tax system has not been used as extensively to promote industrial development. For example, the equivalent percentage falls in the US and the UK were 56 per cent and 60 per cent respectively.

Several factors explain the declining level of corporate tax internationally. One is the increasing use of depreciation allowances. Another is the level of profitability in industry. Evidence available on this is not entirely clear but many commentators suggest that falling profitability is a major reason for the declining trends in manufacturing investment internationally. Figures quoted for the UK indicate that profitability in manufacturing there has dropped from 10 per cent to 3 per cent over the last two decades. A further factor not mentioned in the paper is that while corporate profits are generally taxed at fixed rates, personal taxes are charged at progressive rates. As incomes are pushed into higher tax brackets with rising inflation this would tend to increase the relative tax contribution from the personal sector.

The comparison of grants and corporate tax contributions made in the paper, must be interpreted with caution. In Ireland, new investment and modernisation in manufacturing industry in recent years has taken place at a more rapid pace than in any other EEC country. This has meant that total annual grants paid to industry have increased in line with this expansion. On a cost-per-job basis, however, the grant cost has declined. Over the last 10 years, the approved cost per job has declined by 17 per cent in real terms.

The author refers to the possible "diffusion" of tax incentives through the economy. It should be pointed out that Export Sales Relief has existed since 1956 and apart from relative minor amendments its scope has remained unchanged. Basically, it provides tax relief for manufacturing exports. This relief has been instrumental in encouraging over 800 overseas companies to establish here – the bulk since EEC membership in 1973. Irish industry, however, has also benefited substantially from the relief. For example, in 1976 O'Farrell showed that 49 per cent of industrial exports were from overseas new industry. The balance of 51 per cent was accounted for by Irish firms. Assuming that the benefits of tax relief are proportionately distributed, Irish firms had, in fact, the greater share.

The 10 per cent tax incentive which replaced Export Sales Relief from 1981 onwards raises several important points not discussed in the paper. This incentive is designed to encourage reinvestment of corporate profits. Any dividend distribution is liable for the full rate of income tax. The following chart illustrates some of the implications of this new incentive as compared with Export Sales Relief and the standard 45 per cent tax rate:

		<i>10% Tax</i>	<i>ESR</i>	<i>45% Tax</i>
<i>Company</i>	Taxable Profits	100	100	100
	Corporation Tax (a)	<u>10</u>	<u>Nil</u>	<u>45</u>
	Distributed Profits	<u>90</u>	<u>100</u>	<u>55</u>
<i>Shareholder</i>	Dividend	90	100	55
	Income Tax (b)	<u>52</u>	<u>Nil</u>	<u>23</u>
	After-tax Income	<u>38</u>	<u>100</u>	<u>32</u>
<i>Exchequer</i>	Exchequer Return			
	(a) and (b)	<u>62</u>	<u>Nil</u>	<u>68</u>

The shareholder's income tax is calculated as follows:

	<i>10% Tax</i>	<i>ESR</i>	<i>45% Tax</i>
Dividend received	90	100	55
Imputed Credit	<u>5</u>	<u>Nil</u>	<u>23</u>
Taxable	95	Nil	78
Income Tax @ 60%	57	Nil	46
Less: Tax Credit	<u>5</u>	<u>Nil</u>	<u>23</u>
Tax Payable	<u>52</u>	<u>Nil</u>	<u>23</u>

It must be emphasised that this chart is purely illustrative, and in the real world other complicating issues would exist. Nonetheless, it highlights the main distinguishing features of the different tax regimes.

A company previously liable to corporation tax at 45 per cent, for example, will benefit significantly from the 10 per cent tax scheme. Its after-tax earnings will increase by 35 from 55 to 90, an increase of 64 per cent. A company previously qualifying for Export Sales Relief is not significantly worse off under the new scheme.

Turning to the issue of distribution, a 10 per cent company that distributes its 90 profits, finds that its shareholders will now pay 52 of this in tax (assuming a 60 per cent marginal tax rate). This would give a total tax return to the Exchequer of 62, 52 from the shareholder and 10 from the company. This compares with a total Exchequer take of 68 under the 45 per cent tax scheme, and zero in the case of the Export Sales Relief company. The shareholder's after-tax return is slightly higher at 38 under the 10 per cent tax regime compared with 32 under the 45 per cent tax although it is a much smaller proportion of the total dividend paid to the shareholder. Under Export Sales Relief, the shareholder pays no tax and is left with an after-tax return of 100. Because of the more severe tax treatment of shareholders in the 10 per cent company, reinvestment will be strongly encouraged over dividend distribution.

A critical feature of the new 10 per cent tax is that it will provide a powerful incentive for Irish firms and individuals to set up in manufacturing. This incentive for investment in manufacturing was the main reason the Government introduced the system. The IDA expects a substantial increase in manufacturing investment from native enterprise as a result of the scheme. Virtually all of this increase is expected to come from companies and individuals establishing new manufacturing activities. The degree to which new entrants will enter manufacturing by merger or takeover is likely to be very small.

Finally, a brief reference was made in the paper to transfer pricing by multi-national firms attempting to reduce the group's overall tax liability. In practice this is much more difficult to accomplish than is often assumed. Co-operation among tax authorities internationally, together with stringent anti-avoidance rules, limit the scope for firms to engage in this practice.

S. Cromien: I should like to join with Mr O Broin and Dr McKeon in thanking Mr Stewart for his excellent and painstaking paper. His findings are thought-provoking. There are three points in particular to which I should like to draw attention.

The first is how little tax Irish companies pay, both in comparison with other countries and – although, of course, the study does not examine this – with other Irish taxpayers. On the latter point, I might mention that in 1980, while PAYE taxpayers contributed £875 m. to the Exchequer, manufacturing companies paid in corporation tax only £21 m. I note that Mr Stewart remarks that “the trend in Ireland is likely to be one of a continuing reduction in the proportion of taxable profits paid in tax”.

The second point is that the tax bill of many industrial companies is so reduced by certain tax incentives that they cannot benefit from others that are available. Instead, they pass the tax relief along the line to financial institutions through leasing arrangements, preference share financing and “section 84 loans”. The degree of relief involved is illustrated by the fact that leasing alone results in a tax loss of £40 m. a year.

The paper comments that “It is doubtful that these schemes were initiated by the State but more likely represent an unplanned diffusion of tax incentives”. This remark could certainly have been put more strongly. Section 84 of the Corporation Tax Act 1976 was designed to counter a tax-avoidance practice under which companies could make distributions of profits in the guise of tax-deductible interest payments. Its use to lower the normal tax payments of the lending institutions is clearly one quite opposite to that intended. Similarly, preference share financing and tax-related leasing have been used to bring about tax benefits in ways not, as far as I know, anticipated in the legislation. To make this point is not necessarily to criticise these arrangements, which obviously are useful to industry, but to draw attention to the way they have evolved.

The third point, and it is perhaps the main one, that arises is the question of equity in taxation. This is a complex subject. In discussing the taxation of companies, there is – as often in areas of public policy – a conflict between desirable objectives. On the one hand, it is necessary to attract foreign industry and to encourage domestic industry to expand, so as to generate higher employment and living standards. On the other hand, it seems desirable that as the industrial sector of the economy becomes stronger it should begin to carry more of the cost of public services. In an economy with a weak industrial sector, there is every reason to have a low tax regime. When industry becomes a strong and important part of the economy, it seems equally reasonable to turn to it for some relief to the general taxpayer, who has provided such extensive support out of his pocket through grants and tax concessions in earlier years.

I do not profess to know what is the optimum compromise between the two objectives I have mentioned – encouragement of industrial development and payment of an equitable share of taxation – or whether present arrangements achieve that optimum. At a minimum it is obviously desirable that we should have a public debate on this question of taxation in the company sector.

I may mention that in the 1980 budget statement, the then Minister for Finance, Mr Michael O’Kennedy, commented on the amount of taxation being paid by the financial institutions. This amount is, of course, influenced by the diffusion of the schemes mentioned in the paper. He asked the Commission on Taxation to investigate the taxation of these institutions. He also mentioned specifically in his Budget speech that it would be useful if the Commission on Taxation were to investigate the contribution to taxation by companies at large.

This paper will, I think, make an important contribution to the debate in this area and I congratulate the author again.

John Donnelly: I wish to express my appreciation to Mr Stewart for delivering a paper

which I could understand. If the purpose of taxation was to redistribute wealth it was failing in its objective and was, on the contrary, creating divisions in society to the extent that workers were marching in protest at the effect of taxation, and unfortunately not against the State which imposed the taxes, but to the detriment of their employers. These divisions were multiplying and we now have the division of town and country as well.

I suggest that some member of the Society should read a paper which could outline a system of taxation which would heal the divisions in society and unify the forces to the benefit of all. Such a system might involve a negative taxation system.

Donal de Buitleir: I would like to congratulate Mr Stewart on an excellent paper.

I agree with his main conclusion that effective rates of tax on company profits are very low. If account is taken of tax credits on company distributions, tax paid in the aggregate by companies on their retained profits may well be negative. According to a list of public companies published in the *Sunday Independent* in July, 1980, companies included in Mr Stewart's survey distributed about £35 million in dividends in 1979. The tax credit on these dividends would be about £15 million and this would be available for set-off against shareholders' liability or for repayment. If we deduct this amount from the corporation tax paid by the companies there is a shortfall of almost £2 million. However, a substantial amount of tax effectively flows from companies in the form of PAYE, social insurance contributions and indirect taxes.

Mr Stewart argued in the paper that profits adjusted for inflation were very little different from historical cost profits. He is, of course, correct if unrealised holding gains are included. However, our tax system in other areas only taxes gains on realisation rather than an accrual, e.g., capital gains tax. For this reason, I think it would be useful to show effective tax rates on current cost profits (as computed under SSAP 16). These are likely to be higher than the effective rates on historical cost profits. This is shown from the fact that a survey by Phillips and Drew of the top 150 companies in the United Kingdom in 1977 showed that current cost profits were equal to two-thirds of historical cost profits.

Reply by J.C. Stewart: I would like to begin by thanking everyone who contributed to the discussion of this paper.

First of all I would agree with Mr O Broin about the diversity of factors that affect corporate tax payments in Ireland, and I would add that such diversity surely stems from the extraordinary complexity of the system of corporate taxation, and of the tax system in general.

I am more fundamentally in disagreement with the comments of Dr McKeon on a number of issues, for example, the supposed rapid modernisation of Irish industry, in comparison with other EEC countries, and hence consequent higher capital grants paid in Ireland, or the statement that grant cost per job has declined in real terms. However, I will resist the temptation to reply to these points, and deal with issues more directly relevant to the paper under discussion.

The main points of Dr McKeon's comments would seem to be that the paper largely ignores the effect of the new 10 per cent corporation tax, which it is stated will reduce tax on companies currently liable to tax at nominal rates of 45 per cent, while leaving firms currently benefiting from export tax relief in substantially the same position, and secondly will provide a "powerful incentive" to investment in manufacturing industry, particularly from "native enterprise".

The new tax regime will certainly reduce tax on companies currently paying tax at 45 per cent, but as is discussed later, these companies already have low rates of tax, due to existing tax allowances, and the net incentive of a 10 per cent tax rate will not be very large. The table which Dr McKeon produces to illustrate the effects of a 10 per cent tax

rate, grossly exaggerates the amount of tax revenue accruing to the Irish Exchequer for the following reasons:

- (1) The 10 per cent tax rate will be assessed, not on taxable profits as defined in this paper, but on profits after all existing tax allowances (accelerated depreciation allowances, stock relief, etc.) have been availed of.
- (2) Companies will be taxed at 45 per cent only on distributed profits. Most profits are not currently distributed but reinvested and accrue to shareholders largely in the form of a capital gain, which is almost tax free, under current tax legislation in Ireland. A related point is that Dr McKeon's table assumes the shareholders marginal tax rate is 60 per cent. However, for many shareholders it is zero, for example pension funds, charitable trusts, etc.
- (3) The tax payments shown in the table ignore the issue of the nationality of the shareholder. For example, non-Irish shareholders will not be liable to further tax, although the existence of a withholding tax on dividends paid abroad may complicate matters.
- (4) A final point relates to the greatly increased scope for both tax avoidance and tax evasion which the new tax presents, for example switching of costs, such as interest charges within a group of companies from a manufacturing company to a non-manufacturing company. The anti-tax avoidance legislation passed in connection with the 10 per cent rate would be difficult to enforce, as it would require detailed access to internal company documents relating to prices set on intra-firm trade.

It is doubtful that a 10 per cent corporate tax will provide a "powerful incentive" to investment in manufacturing industry for the following three reasons:

- (1) There is an assumed direct relationship between fiscal incentives and investment, whereas investment more likely depends on future expected profitability. Fiscal incentives enhance returns on projects that are already potentially profitable, but they do not create profitable projects in themselves. The period after the Second World War up to the first oil crisis, appears in retrospect to have been an extremely favourable time for investment in developed economies. It is unlikely that such a favourable climate for investment will re-emerge in the foreseeable future. Under these circumstances it is unlikely that fiscal incentives, other than cash grants, would have anything other than a limited effect in increasing the rate of investment in manufacturing.
- (2) The fiscal regime of capital grants and tax incentives which existed up to 1980 was very favourable to corporate investment. It is difficult to believe that all that was required to unleash an investment boom was a reduced rate of corporate tax.
- (3) A final reason which relates more to attracting foreign direct investment rather than domestically generated investment, is that in future years it is likely that the tax regime in Ireland will become relatively less attractive to foreign investment, because of (a) opposition from foreign Governments to the use of tax havens which may become reflected in difficulties in obtaining tax credits for tax foregone, or (b) in the extension of tax reliefs in other countries to the corporate sector, thus reducing the relative attraction of Ireland as a location.

Dr McKeon also states that tax incentives "do not involve up-front Exchequer outflows" and hence there is no tax loss to the Exchequer for companies that do not become

profitable. However, companies which are not making profits may transfer tax benefits to other companies by means of leasing and "section 84" loans.

I agree with the points made by Dr McKeon that there are many and varied reasons why tax rates appear to be falling in a broad range of countries, for example, due to the international recession, and also that there are considerable difficulties in making international comparisons between countries of grants paid to the corporate sector, but not because investment has taken place more rapidly in Ireland than in other countries, but rather due to other factors such as the different ways in which public sector corporations are financed. For example, in Ireland if NET had received capital grants rather than loans and equity, this would have made a considerable difference to aggregate capital. Dr McKeon also states that the paper does not mention that tax rates may be higher than those calculated in the paper, because of progression in personal tax rates. This point is made on p. 16 of the paper, and also that tax rates may be lower than those calculated because shareholders may be tax exempt, as in the case of charities, or pay tax at less than the standard rate. The aggregate data presented in Section (6) of the paper would take account of both of these points.

A study by O'Farrell was also cited by Dr McKeon to the effect that 51 per cent of exports came from Irish firms, and hence it is concluded that Irish firms are the major beneficiaries of export tax relief. I am not sure what is meant by an Irish firm in the study by O'Farrell. However, in a study related to that covered in this paper, only 12 per cent of total sales were export sales in 1979. This figure is based on data from 46 Irish or partly Irish owned firms also included in the study of tax rates in this paper, and which publish export and sales figures.

Finally Dr McKeon dismissed the use of transfer pricing by foreign owned firms operating in Ireland. There are many examples and studies of the use of transfer pricing by firms in other countries, some of which are surveyed by Stewart (1977). It would indeed be surprising if companies operating in Ireland did not also use transfer pricing to switch profits. The issue is not whether firms use transfer pricing to switch profits or not, but rather the extent to which this occurs. Evidence for Ireland is very scanty. However, it is quite likely that the major oil companies use transfer pricing to switch profits out of Ireland, as indeed they do in other countries. It is also well known that American investment in Ireland is exceptionally profitable. This is certainly consistent with the use of transfer pricing to switch profits in to Ireland.

Dr de Buitleir has raised a number of interesting points. Companies collect tax on behalf of shareholders, but this tax is not passed on to the Exchequer because of various tax reliefs, but accrues to the shareholder in the form of capital gains. Dr de Buitleir describes this situation as one of negative tax rates on companies. However, if the company and the shareholder are treated as one tax paying unit, as is done in this paper, the tax rate does not appear negative for companies and positive for shareholders, but rather at a single low positive rate.

Dr de Buitleir also considers that PAYE, Social Insurance and various indirect taxes also flow essentially from the corporate sector. This may be true of some companies in the corporate sector, for example, an increase in PAYE may simply result in increased wages, and a fall in company profits. That is, the increase in PAYE has been passed on to the firm, but it is most unlikely that all or even the major portion of PAYE, Social Insurance, and indirect taxes are borne by the corporate sector.

Dr de Buitleir also considers that it would be useful to show tax rates calculated on current cost profits, as computed under SSAP 16, as these exclude unrealised holding gains. Profits as calculated under SSAP 16, however, include a gearing adjustment, which is calculated on the basis of an increase in the additional costs arising from inflation, and is directly analogous, and has the same effect of increasing profits as calculating the

gearing adjustment on the basis of an increase in the value of assets. In other words, the gearing adjustment as currently calculated has the same effect on profits as if some consideration were taken of the increase in the value of assets due to inflation. It was argued in the paper that if this gearing adjustment were based on the full increase in the value of assets due to inflation, inflation adjusted profits would be similar to historic cost profits.

In conclusion, there would appear to have been considerable diffusion of fiscal incentives available to the corporate sector. As Mr Cromien has pointed out, preference share financing, leasing, as well as "section 84" loans were not anticipated in any legislation.

Mr Cromien also points out that a central aspect of the paper is the question of equity in taxation, and that this is a complex problem. What is equitable is subject to differing interpretations, but it is important to realise that corporations are owned by people, that is the shareholders. Exempting this class of people from taxation, for whatever reason and with whatever results, necessarily entails inequities in the tax system.

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COMPANIES INCLUDED IN THE STUDY

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|-------------------------------|------------------------------|
| Abbey Ltd. | J. & G. Boyd Ltd. |
| Abbey Clothing Ltd. | Braids Ltd. |
| Alliance & Dublin Gas Co. | Brittain Ltd. |
| Arklow Pottery Ltd. | Brooks Watson Ltd. |
| Arnott Ltd. | Brown Thomas Ltd. |
| Ashtown Tinbox (Ireland) Ltd. | Browne & Nolan Ltd. |
| Associated Properties Ltd. | P.C. Cahill Ltd. |
| Autozero Ltd. | Cannock & Co. Ltd. |
| Bacon Company of Ireland Ltd. | Carrigaline Pottery Co. Ltd. |
| Baker, Wardell & Co. Ltd. | Carroll Industries Ltd. |
| Barrow Milling Ltd. | Castle Brand Ltd. |
| Bolands Ltd. | Castlebar Bacon Company Ltd. |
| Booth Poole Ltd. | Cement Roadstone Ltd. |

Chipboard Ltd.
 Clarence Hotels Ltd.
 Clondalkin Paper Ltd.
 Concrete Products Ltd.
 Convoy Woolen Co. Ltd.
 Cork Gas Company
 James Crean Ltd.
 Creation Group Ltd.
 Crowe Wilson Ltd.
 John Daly & Co. Ltd.
 Dock Milling Group Ltd.
 Thomas Dockrell Ltd.
 J. Donohoe Ltd.
 Doreen Holdings Ltd.
 W. Drummond and Sons Ltd.
 Dublin Artisans Dwellings Ltd.
 Dublin & Central Properties Ltd.
 Dubtex Clothing Ltd.
 Dungarvan Leathers Ltd.
 Dwyer Ltd.
 Edenderry Shoe Co. Ltd.
 Erin Peat Products Ltd.
 Estates Development Ltd.
 Ever Ready Ltd.
 Ferrier Pollock Ltd.
 Fine Wool Fabrics Ltd.
 Fitzwilton Ltd.
 Freedex Ltd.
 Gibson Guy & Smallridge Ltd.
 Glen Abbey Ltd.
 R. & J. Goff Ltd.
 J. & L.F. Goodbody Ltd.
 Graves & Co. Ltd.
 Green Group Ltd.
 Greenmount & Boyne Ltd.
 Gresham Hotel Ltd.
 R. & H. Hall Ltd.
 John Halliday Ltd.
 Hammond Holdings Ltd.
 Harcourt Irish Holdings Ltd.
 Harringtons and Goodlass Wall Ltd.
 Hayes Cunningham & Robinson Ltd.
 Heiton Holdings Ltd.
 Hely Group Ltd.
 I.W.P.M. Holdings Ltd.
 Ideal Menswear Ltd.
 Independent Newspapers Ltd.
 Irish Cinemas Ltd.
 Irish Distillers Ltd.
 Irish Dunlop Ltd.
 Irish Glass Bottle Co. Ltd.
 Irish International Trading Corp. Ltd.
 Irish Leathers Ltd.
 Irish Oil & Cake Mills Ltd.
 Irish Pharmaceuticals Ltd.
 Irish Press Ltd.
 Irish Ropes Ltd.
 Irish Tanners Ltd.
 Irish Times Ltd.
 Irish Wire Products Ltd.
 Irish Worsted Mills Ltd.
 W. & R. Jacob Ltd.
 Jameson Ltd.
 Janelle Ltd.
 Jones Group Ltd.
 Kilkenny Engineering Products Ltd.
 Edward Lee & Co. Ltd.
 Leethems (Ireland) Ltd.
 Lyons Irish Holdings Ltd.
 McBirney Ltd.
 McCairns Ltd.
 McFerran & Guilford Ltd.
 McInerny Ltd.
 Maguire & Patterson Ltd.
 T. & C. Martin Ltd.
 Martin Mahony Ltd.
 Massers Waterford Iron Founders Ltd.
 May Roberts Ltd.
 Mayco Ltd.
 Merchants Warehousing Ltd.
 Metal Products (Cork) Ltd.
 Milford (Donegal) Ltd.
 A. Millar & Co. Ltd.
 Minch Norton Ltd.
 Monsell Mitchell Ltd.
 Mooney Ltd.
 Moore Holdings Ltd.
 Murdochs Ltd.
 J.J. Murphy Ltd.
 Navan Carpets Ltd.
 Newbridge Holdings Ltd.
 John C. Parkes & Sons Ltd.
 Peterson Tennant Ltd.
 Pye (Ireland) Ltd.
 R.T.D. Group Ltd.
 Ranks (Ireland) Ltd.

Rawson Ltd.
Readymix Ltd.
Roadstone Ltd.
Rohan Group Ltd.
Salts Ltd.
Seaford Gentex Ltd.
Shannon Meats Ltd.
Smith & Pearson Ltd.
Smith Group Ltd.
Smithwicks Ltd.
Smurfits Ltd.
Smyth & Co. Ltd.
Solus Teoranto
Sunbeam Wolsey Ltd.
Swan Ryan International Ltd.

Swift Brook Paper Mills Ltd.
Switzer Ltd.
T.M.G. Ltd.
Temple Press Ltd.
Thwaites Ltd.
Torc Manufacturing Ltd.
Trimproof Ltd.
Unidare Ltd.
United Drug & Chemical Co. Ltd.
Waterford Glass Ltd.
Joshua Watson Ltd.
Williams (H.) Ltd.
J.H. Woodington Ltd.
Youghal Carpets Ltd.

APPENDIX

Appendix Table 1 *Summary of the Main Fiscal Incentives and Tax Rates (per cent) 1964-1979*¹

	1964-65	1966	1967	1968	1969	1970	1971	1972-74	1975	1976	1977	1978	1979
<i>Depreciation</i>													
<i>Plant and machinery</i> ²													
Initial Allowances	40	40	50	60	60	60	60	100	100	100	100	100	100
Free Depreciation							100	100	100	100	100	100	100
<i>Buildings</i>													
Initial Allowances	10	10	10	10	10	10	10	10	50	50	50	100	100
Annual Depreciation	2	2	2	2	2	2	2	2	4	4	4	4	4
<i>Export Tax Relief</i>													
Export Tax Relief	100	100	100	100	100	100	100	100	100	100	100	100	100
<i>Interest Rate Relief</i>													
Interest Rate Relief	100	100	100	100	100	100	100	100	100	100	100	100	100
<i>Tax Relief on Stock Profits</i>													
Tax Relief on Stock Profits									100	100	100	100	75
<i>Capital Grants (maximum obtainable)</i>													
New Industry	33	33	33	35	35	35	35	35	35	35	35	35	45
Adaptation/Reequipment	25	25	25	25	25	25	25	25	25	25	25	25	25
Small Industry					45	45	45	45	45	45	45	45	45
Research and Development ³							35	35	35	35	35	35	50
<i>Taxation Income</i>													
Company Rate ⁴	45	45	50	50	50	50	50	50	50	50	45	45	45
Growing Firm ⁵											25	25	25
Capital Gains Tax ⁶									26	26	26	30	30

Notes on Appendix Table 1

¹The data relate to firms operating outside certain designated areas and the Dublin area. Grants up to 60 per cent of the cost of fixed assets may be paid in the designated areas to manufacturing firms, and since 1971 an additional 20 per cent investment allowance may be claimed. Lower grants and depreciation allowances applied in the Dublin area until 1977 but those lower rates only apply to depreciation allowances since then.

²Only one of free depreciation or initial allowances may be claimed. Wear and tear allowance may also be claimed instead of free depreciation, and in addition to investment allowances.

³Grants are also available for running costs.

⁴For the period 1964-65 and 1966-75 the first £2,500 of profits were taxed at rates of 38 and 40 per cent, respectively. Since 1976 company taxation has become rather more progressive, the first £25,000 of profits are now taxed at 35 per cent, from £25,000 to £35,000 the rate varies from 35 per cent to 45 per cent, and only above £35,000 are profits taxed at 45 per cent.

⁵To qualify, sales and employment must have increased by 5 and 3 per cent respectively. In 1978 the qualification was reduced to one of employment only.

⁶From April 1978 taxable capital gains can be adjusted for inflation.

Since 1975 firms may receive grants of up to £20 a week per employee for new employment over a limited time span (under one year). In 1978 firms in the clothing footwear, and textile industries received a grant of £5 per employee per week.

Source Budget Statements presented to Dáil Eireann 1963-79, Annual Reports of An Foras Tionscal, Dublin, 1963-69, and Annual Reports of the Industrial Development Authority, Dublin, 1970-79.