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TAX REFORM AND INCOME DISTRIBUTION IN THE MEDIUM TERM*

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1 Introduction

This paper considers how future macro-economic developments in the Irish economy and elsewhere are likely to affect the distribution of income and the tax system. In particular it examines how 1992 and related developments will affect the scope for using the tax system to change the distribution of income. In addition, using the ESRI's macro-economic model it explores the extent to which policy on income distribution is likely to be constrained by the existing structure of the economy.

Recent research has told us much about the extent of poverty in Ireland[1]. However, the way forward in terms of tackling the problem is by no means clearcut. While it may appear to be a straight forward case of taking resources from the rich and giving them to the poor, in a complex modern society this is not a simple operation. Problems arise as changes in taxation affect the behaviour of those subject to tax. For example, an increase in tax rates will tend to increase unemployment and, therefore, poverty, while the expenditure of the additional revenue helps alleviate poverty. As a result, the net effect of such policy changes is unclear.

The fact that income redistribution is not simple in a modern society such as Ireland is no excuse for washing one's hands and forgetting about the problem. However, it does mean that a wide range of issues must be considered in formulating policy in this area. Research indicates that, in the past, the social welfare system has played a more important role than the tax system in changing the distribution of income in Ireland[2]. However, the tax system also has an important role to play, if only in funding the social welfare system. The purpose of this paper is to consider, at a macro-economic level, some of the constraints on using the tax system to redistribute income, how these constraints can best be overcome, and how the tax system should be developed over the next five years to achieve a range of possible social and economic objectives.

The constraints which we face can be considered under three headings: the external environment, domestic policy, and the behaviour of individuals and groups in Irish society. I consider how domestic policy can be changed to achieve certain objectives, assuming that past behaviour is a good predictor of future behaviour by individual agents in Irish society (e.g. consumers, trade unionists, employers, farmers etc.). The feasibility of changing such behaviour I leave to politicians and other social scientists and concentrate instead on domestic economic policy, especially the tax system, and examine the scope for change in the medium-term.

Section 2 of this paper briefly summarises the domestic and international economic environment which we are likely to face over the next five years. It draws heavily on the research in the last ESRI *Medium-Term Review*[3]. Section 3 examines the Irish tax system in the wider European context and it considers how *1992* will require changes in the Irish tax system over the next five years. Using the ESRI's Macro-economic model Section 4 looks at the interaction of the tax system with the economy and considers how the interaction constrains the use of the tax system to achieve major changes in the distribution of income. Finally, in Section 5, I discuss changes in the tax system which are both feasible in the economic environment which we face over the next five years and which might effect some redistribution of income.

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1 T. Callan, D.F. Hannan, B. Nolan, B.J. Whelan, and S. Creighton, 1988, "Poverty and the Social Welfare System in Ireland", *Poverty and the Social Welfare System in Ireland*, No. 1, Combat Poverty Agency.

2 D.C. Murphy, 1983, "The Impact of State Taxes and Benefits on Irish Household Incomes", *Journal Of The Statistical And Social Inquiry Society of Ireland*, Vol.. XXV, Part I.

3 J. Bradley and J. Fitz Gerald, 1989, *Medium-Term Review: 1989-1994*, No. 3, The Economic and Social Research Institute.

2 The Irish Economy in the Medium-Term

The ESRI's *Medium-Term Review*, published in July of this year, forecasted a major recovery in the Irish economy over the next five years. The growth rate is forecast to average nearly 5 per cent a year over the period to 1994 and there will be a substantial increase in employment of over 80,000 people. If realised, this will represent the best performance of the Irish economy since the 1960s.

The *Review* identified a number of reasons for this turn-round in economic fortunes.

Firstly, since 1986 there has been a major improvement in the competitive position of the Irish economy. Interest rates, after adjusting for inflation, had been higher than in most other developed countries since the early 1980s; since 1986 they have fallen in Ireland while they have risen in countries such as the UK. Wage costs have risen more slowly in Ireland than in major competitor countries since the mid 1980s. Taken together these improvements have resulted in major growth in manufacturing industry. Because industry is slow to react to such changes the lagged impact of the improved competitiveness will still affect the manufacturing sector over the next few years.

Secondly, the building industry, which suffered severely from the economic cutbacks and recession of the 1980s, has already begun to recover.

Thirdly, and underlying the upturn generally, there is the long awaited improvement in the public finances. For much of the 1980s it was necessary to increase taxes and cut expenditure to even keep up with the spiralling debt. However, once the corner has been turned, the economy enters a *virtuous circle*. Because deflation is no longer necessary the economy grows more rapidly; because the economy grows more rapidly the borrowing requirement falls. We have entered this latter phase and, provided the world economy undergos no major traumas and, provided we manage the recovery of the Irish economy sensibly, we can look forward to a period of stable growth in the medium term.

While the forecast generally assumes no change in the volume of government expenditure (no change in public sector employment) and indexation of tax rates and bands, there are three exceptions which reflect the current stance of economic policy. These exceptions relate to income tax, transfer payments and capital expenditure.

Neither the assumption concerning the rate of increase in real welfare payments nor that concerning the tax cuts are intended to be normative (i.e. a statement as to what should be done). They rather represent an assessment as to what a continuation of currently announced policy would represent. As such they give some indication as to what may happen over the next five years on current policies and they present a useful benchmark against which to judge the possible impact of alternative policies. In the case of public capital expenditure it is assumed that the government's *National Development Plan* is implemented in full.

The reduction assumed in income tax amounts to 0.66 per cent of personal income each year. In 1990 the cost of this concession, compared to pure indexation, would be about £140 million. For later years the cost would rise in line with inflation. The forecast also assumes that, in line with past experience, social welfare transfers rise somewhat faster than the rate of inflation; i.e. a real increase of about 1.25% a year.

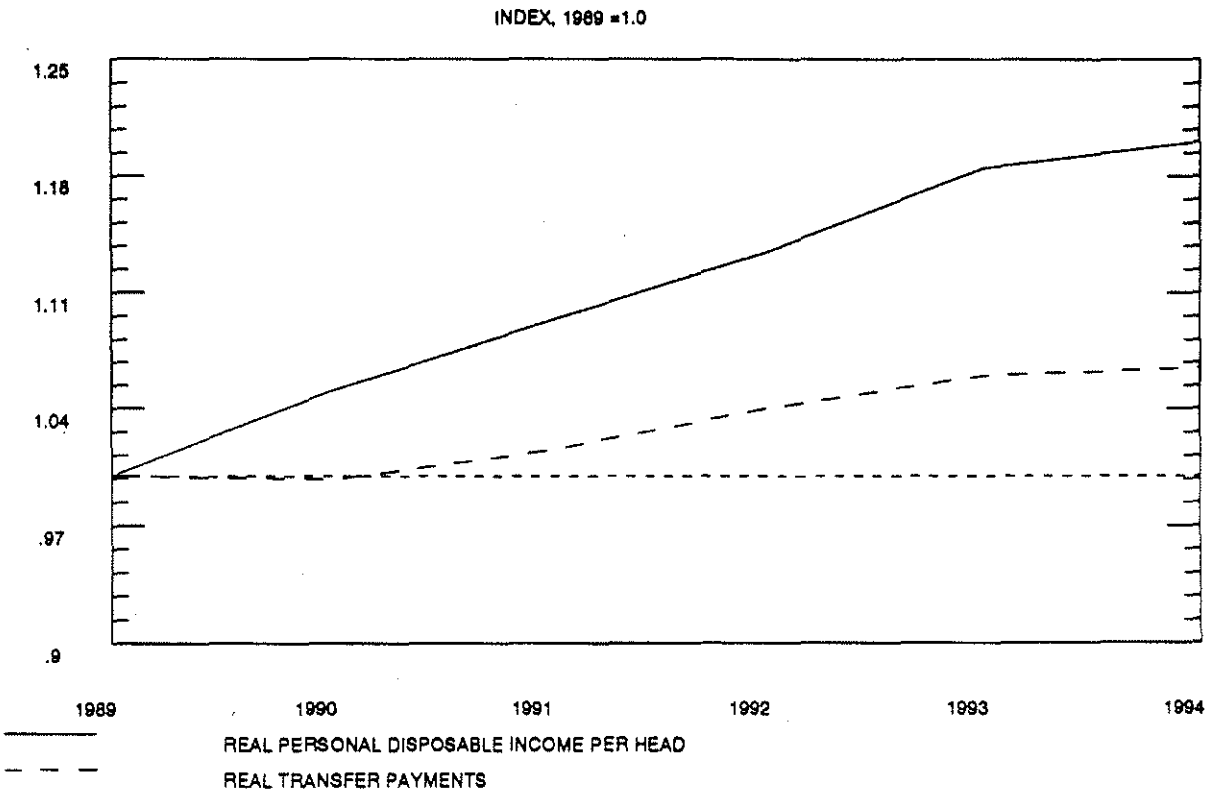
The return to a stable and fairly high rate of growth carries major implications for the living standards of the community over the next five years. While it is possible that the *rising tide may lift all boats* this need not necessarily happen. While the *Review* can only give a rough indication of likely trends in the distribution of income it does suggest that some groups in society will see little of this improvement in living standards.

While there will obviously be some differences in the experience of the workforce in different sectors of the economy, the *Medium-Term Review* suggests that these will not be very great. For example, the after tax income per person employed in the agricultural and non-agricultural sectors is forecast to show a similar pattern of growth over the period. After deduction of tax and adjustment for inflation, personal income as a whole is forecast to grow on average by over 3.75 per cent a year. When allowance is made for the fall in population over the period 1988-94, the rise in real after tax income per head is forecast to be over 4 per cent.

Even with the modest increase in real transfers assumed in the *Review*, as can be seen in Figure 1, the gap between the incomes of those dependent on social welfare transfers and the rest of the community will grow[4]. However, the relative change in rates of payment to those dependent on different forms of income is only a very limited indicator of likely changes in the distribution of income over the next five years. Changes in numbers in different groups can clearly considerably alter the distribution. Thus the proportion of the population which is dependent on social welfare payments, in particular the numbers unemployed, will affect the distribution in the medium term.

Figure 1

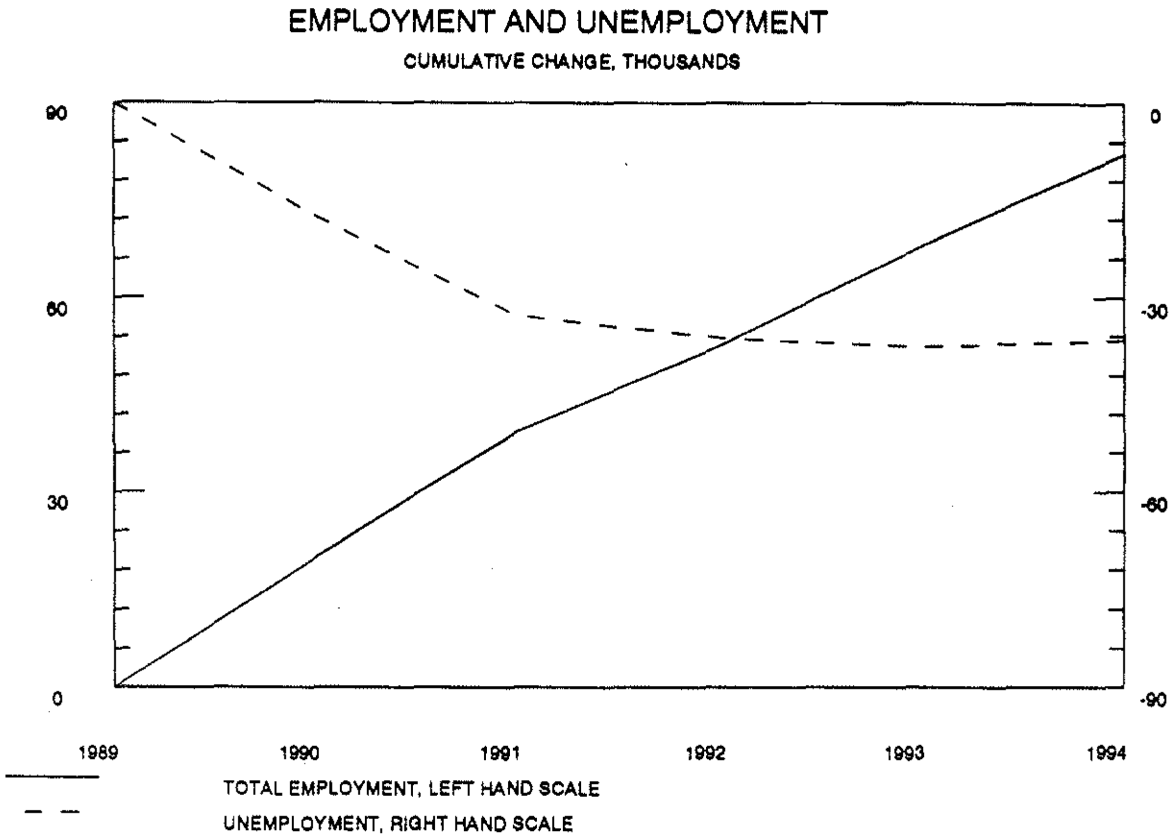
COMPARISON OF REAL DISPOSABLE INCOME AND REAL TRANSFERS



4 This contrasts with the situation between 1980 and 1988 when real transfers per head grew more rapidly than real disposable income per head.

In the central forecast of the *Review* it is envisaged that the numbers employed will rise by 82,000 over the period to 1994 while the numbers unemployed will only drop by 37,000 (see Figure 2). The difference arises from the fact that the model based forecast indicates that the numbers emigrating will be cut drastically over the period. As the domestic labour market improves and employment grows, the attractions and possibilities of employment in Ireland will reduce net emigration to around 11,000 a year in 1994. In addition, because of the improvement in job opportunities around 20,000 to 30,000 people, who are not currently seeking work, will take up employment. These two groups, will obviously be major beneficiaries from the recovery.

Figure 2



If unemployment were only of short duration, so that most of those experiencing unemployment over the next five years also shared in the benefits accruing to those in employment, the long term effects on income distribution would be less clear. However, past experience suggests that the long-term unemployed will continue to fair badly in spite of the economic upturn. Those with skills and education will be more likely to find employment while the unskilled long term unemployed will see little benefit from the economic recovery. Thus unchanged policies could see a relative disimprovement in the position of those dependent on transfer payments on a long-term basis.

As the *Review* suggests the economic turn-round over the next five years provides scope for changing current policy. While the imperative of controlling the public debt has driven policy over much of the 1980s more choice will be available in the 1990s. In the short-term the *Review* forecasts that there will be serious danger of domestically induced inflation over the next two years which will necessitate a continuation of fairly stringent fiscal policy and possible movement of the public sector into surplus in 1991. Failure to choke off such pressures could seriously prejudice employment growth in the medium-term. Thus while it may seem perverse to be recommending that the exchequer run a surplus in 1991 in the face of continuing high unemployment, failure to do so could lead to more unemployed and more people living in poverty in the long-term. Because of this danger it may be necessary to postpone even the limited tax reduction assumed in the *Review* until 1991 or 1992.

The fact that fiscal policy will have to remain tough in 1990, and possibly in 1991, does not mean that progress can not be made in reforming the tax system. In fact, as indicated in the *Review*, tax reform could contribute to easing the inflationary pressures in certain sectors of the economy. It could also begin the task of improving the long-term efficiency of the economy while, at the same time, changing the distribution of income in a desirable direction. This matter is dealt with later in the paper. What the fiscal policy constraint means is that expenditure and taxation can be changed but that the size of these changes must be matched so that the borrowing requirement continues to fall.

However, once these inflationary problems come under control in 1992 or 1993 it will be possible to use some of the increasing resources accruing to the state to improve services or cut taxation. Real choices will be once again possible. The next section considers how these choices will be circumscribed by developments in the other European economies and Section 4 considers the domestic limitations on policy.

Finally, it is worth noting that the scenario presented here is only a forecast. The *Review* indicates a range of different factors which could result in slower economic growth in the medium term. In particular, any world financial upheaval could be extremely serious because of Ireland's exposure, through its foreign debts, to a rise in world interest rates. Through raising unemployment it could seriously affect the position of the poor while the government would be limited in its room for manoeuvre. The need to reduce such exposure to foreign crises and increase the government's ability to insulate the domestic community, especially the poor, lies behind the long-term objective of reducing our foreign indebtedness.

3 The External Environment

An important consideration in determining the structure of the Irish tax system and the level of taxation is the external environment in which the economy operates. It is not that other countries know what is best in the area of taxation, or that what is best for other countries is necessarily best for Ireland. Rather, the importance of the external environment arises from the openness of the Irish economy. Whether we like it or not, the fact that trade accounts for so much of our output; that Irish people are free to migrate (and frequently do); the fact that Irish people can drive across a border into the North and shop; all these mean that we can not determine our tax structure independently of other countries. Independence can only be gained by ending these freedoms and, as such, is not an option. This section considers what restrictions the external environment places on our freedom of action to-day and how the situation is likely to develop over the next five years with the advent of *1992*.

The interdependence of the Irish and the EC economies operates at two levels. Firstly, at a macro-economic level, we can not stimulate our economy by borrowing and cutting taxation unless other countries follow suit. The débacle of the 1970s taught us that. The same lesson has had to be learnt over the last ten years by other much more closed economies such as France, the UK and the USA.

The way that our international interdependence operates at a micro-economic level in terms of individual tax rates is much more complex. It also differs from tax to tax. The extent of our freedom to act independently depends, essentially, on the extent to which the person who eventually pays the relevant tax can escape it through moving abroad. In the case of taxes where such freedom is easily exercised we, perforce, must follow reasonably closely what happens elsewhere, even if it is not socially desirable. To do otherwise will impose social and economic costs which would outweigh the benefits of independent action. Freedom in such cases is more easily exercised if one wants to charge a lower rate of tax, not a higher.

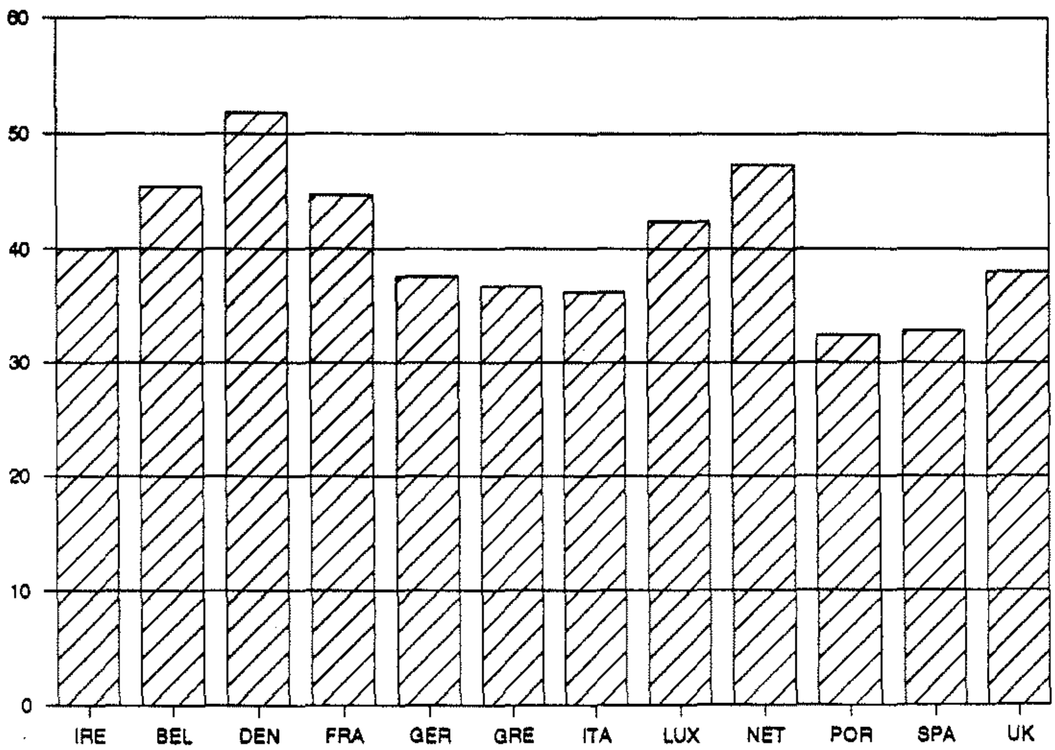
A first step to evaluating the extent of our independence is to examine the difference in tax structures across the EC member states. What other countries do would not necessarily even be the best solution for a closed Irish economy (which does not exist) but it does set the parameters in which we can determine our own tax policy.

3.1 Comparison of EC Tax Systems

Figure 3 sets out a comparison of tax revenue as a percentage of GDP in the different EC members in 1987. As can be seen from this Figure, in 1987 Ireland was around the middle of the range of EC members with tax revenue accounting for just under 40% of GDP. The newer member states and Italy had significantly lower overall tax levels and the UK and Germany were around 2 percentage points below the Irish level. However, it could be argued that Ireland has an unusually high tax level for its standard of living. By 1994 the *Medium-Term Review* shows the tax/GDP ratio in Ireland falling to 37.4%.

Figure 3

TAX REVENUE AS % OF GDP



There is considerable variation in the composition of total tax revenue across the EC member states. As shown in Table 1, within the EC only Portugal, Greece and Italy pay a significantly lower proportion of GNP in direct taxes[5] than does Ireland. Both the UK and Spain collect approximately the same proportion of GDP in direct taxation as does Ireland and the other member states collect substantially higher shares.

Table 1: Taxation as % of GDP

Comparison of Ireland and other EC countries 1987

	Total	Income	Companies	Income + Companies	Social Security	Direct	Property	Goods & Services	Other
Ireland	39.9	14.1	1.4	15.5	6.1	21.6	1.1	17.2	0.0
Belgium*	45.4	15.3	3.0	18.3	15.3	33.6	0.8	10.9	0.1
Denmark	51.8	27.1	2.3	29.4	2.1	31.5	2.6	17.6	0.1
France	44.7	5.8	2.3	8.1	20.0	28.1	2.1	13.1	1.4
Germany	37.6	10.9	1.9	12.8	14.0	26.8	1.2	9.6	0.0
Greece*	36.7	5.0	1.4	6.4	12.6	19.0	1.0	16.7	0.0
Italy*	36.2	10.8	2.9	13.7	12.6	26.3	1.0	8.9	0.0
Luxembourg*	42.4	11.2	7.1	18.3	11.1	29.4	2.6	10.4	0.0
Netherlands	47.3	9.5	3.7	13.2	19.7	32.9	1.7	12.5	0.2
Portugal*	32.4	6.9	NA	6.9	9.1	16.0	0.6	15.6	0.2
Spain	32.8	7.5	2.3	9.8	12.0	21.8	1.0	9.8	0.2
UK	38.0	10.1	4.0	14.1	7.0	21.1	5.0	11.9	0.0

* 1986 data

Direct taxation can be broken down into income tax, social security (or pay-roll) taxes and company taxes. In Ireland income taxes account for a relatively large share of GDP while social security taxes have a below average share. Company taxation generally accounts for a relatively small share of GDP with Ireland falling at the bottom of the range[6].

It is in the area of indirect taxation that Ireland stands out from the bulk of other members of the EC. Only Denmark collects a higher share of GDP in the form of indirect taxation than Ireland and the proportion collected by most other members is well below that in Ireland.

Five EC members place significantly greater reliance on property taxes as a source of revenue than does Ireland.

3.2 Implications for Irish Tax System

These data on the share of different taxes in GDP provide useful background in examining the external forces affecting the Irish tax system. However, they do not tell us how the Irish tax system should or could change over time. Their significance for Ireland depends on the extent to which the Irish economy is open to the outside world. This will determine the extent to which we have to follow the example of other EC members.

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5 Including social security contributions.

6 In France the bulk of the *other taxation* is levied on businesses so that all business taxes taken together account for between 3 and 4 per cent of GDP.

In the case of taxes on the income accruing from financial assets there is very great potential mobility of the tax base. Even with exchange control there was extensive movement of capital into and out of Ireland. The introduction of the DIRT tax in Ireland was accompanied by a sizeable increase in *non-resident* deposits in the Irish tax system probably arising from a desire (and an ability) to evade the tax by nominally shifting jurisdiction. In Germany, the prospect of the introduction at the beginning of 1989 of a tax, like our deposit interest retention tax, led to such an outflow of *hot* money from Germany in 1988 that the tax was withdrawn.

This highlights the problem facing member states of the EC in acting alone in this area. In the future, with the ending of all restrictions on the movement of capital, it will be important to reach some agreement on taxation in this area. Otherwise major new distortions may be introduced as it becomes profitable for owners of substantial investment funds to evade tax by moving them to low tax or zero tax environments. Unfortunately current EC Commission proposals for harmonisation in this area look like foundering on the rock of UK and Luxembourg resistance.

The failure to introduce a coordinated approach to this area of taxation has adverse implications for the use of tax policy to redistribute income. Holders of wealth in the form of financial assets probably tend to be better off than the average tax-payer. The fact that they can evade or avoid tax on the income from these financial assets is clearly regressive.

Indirect taxation, levied on goods which are generally fairly mobile, is also an area where foreign tax regimes impinge on Ireland and our choice of tax rate. This area is currently much in the news because of the proposals for *1992*.

The fact that Indirect taxes are higher in Ireland than in most other member states of the EC has been discussed above. The reasons for the difference arise partly from the need to raise revenue and partly from a perception that consumption of certain goods, such as alcohol and tobacco, should be discouraged. There is a movement in other countries, especially Denmark and Germany, to raise taxes on energy for environmental reasons. These differences in tax policy reflect differences in national preferences and priorities. Because of these differences in preferences, a harmonised indirect tax system will only be *optimal* in very limited circumstances[7]

However, even with existing controls on the movement of goods the differences in tax rates have led to substantial cross-border shopping and large scale smuggling[8]. This has in the past necessitated some changes in the Irish tax system to bring it more into line with the UK. For example, in 1985 excise tax on spirits was reduced to stem the flow of alcohol from the North. I deal with the full implications of *1992* and the abolition of border controls below.

In the case of company taxation, the policy adopted in the 1950s, and maintained since then, has been to exploit the integrated nature of the world economy and attract business to Ireland by charging a lower rate of tax on profits than that charged in many other countries. As a result, it is not surprising that revenue from this source accounts for a lower than average share of GDP in Ireland and, as a result, there is more freedom, if desired, to increase taxation in this area. However, as the tax rate on manufacturing industry is raised, at some point there will be some loss of incentive for firms to locate in Ireland.

7 M. Keen, 1989, "Pareto-Improving Indirect Tax Harmonisation", *European Economic Review*, Vol. 33, No. 1, January.

8 See Fitz Gerald, J.D., T.P.Quinn, B.J.Whelan, and J.A. Williams, 1988. *An Analysis of Cross-Border Shopping*, ESRI General Research series No. 137.

In the case of income taxes and pay-roll taxes the sustainability or otherwise of the current Irish tax system depends on a range of factors. It depends on the incidence of the tax. To the extent that it falls on employees rather than employers it will not affect the competitiveness of industry and services and should not affect the demand for labour. However, if the tax results in higher wage settlements, passing back some of the cost to the employer, the employer may shift production to an alternative cheaper location outside Ireland. In such a case part of the cost of the tax would be borne by those made unemployed through the shifting of output abroad.

Thus changes in direct tax rates in competing countries, such as in Ireland and its EC partners, can affect the level of output in individual countries if some of the incidence of the tax falls on business through higher pay costs. This constraint can be quite serious and is discussed in more detail in the next section.

Even if all the incidence of the direct taxes falls on employees there may be effects on the economy through the supply side of the labour market (affecting the willingness of people to work in Ireland). This supply effect may be enhanced to the extent that there is a possibility for workers to obtain employment in different countries. Because of the integration of the Irish labour market into that of the UK the importance of direct tax rates in the UK in affecting the supply of labour in Ireland may be greater than in the case of most other EC members.

The importance of this effect has not been quantified. It depends on how sensitive migration is to the rates of return in different labour markets. Anecdotal evidence suggests that it has had an effect in encouraging young skilled workers to leave Ireland and seek work in the UK in recent years. However, the impact of this emigration on the Irish economy is not easily quantified.

While the possibility exists for people to avoid paying Irish tax by emigrating, many more factors affect such a decision than current differences in rates of income tax. The standard of living enjoyable in different countries is also affected by the standard of services and many more intangible or unquantifiable items. Thus for the bulk of people quite significant differences can exist between rates of direct taxation in neighbouring countries without causing significant migration. While there may be some effect on the behaviour of specific groups, such as young skilled workers, our freedom to determine our own system of direct taxation is much greater than is the case for indirect taxation.

The final area of taxation to be considered is property taxation. In a sense fixed property, such as houses and land, is the most immobile of all tax bases. As such, the restrictions on our freedom of action arising from differences in tax policy compared to neighbouring EC members are likely to be minimal. In addition, as a country charging very low rates of tax on property, we have considerable scope for increasing these rates.

Overall our freedom of action on the taxation of income from capital is affected by developments elsewhere. In the case of indirect taxation there is already pressure to reduce rates due to the fact that our rates are well above those charged elsewhere. In the case of direct taxation, including company taxation, and property taxes, the international environment leaves us some scope to either reduce or increase rates in accordance with our own preferences or economic or social needs.

3.3 The Impact of *1992*.

The advent of *1992* may potentially affect our tax system in three areas: taxes on income from capital; indirect taxes; company taxation. The changes which it may bring are part of the ongoing process, described above, of the growing interdependence of developed economies.

In the area of the taxation of income from capital Ireland, like most other EC members, faces problems from the growing freedom for capital to move freely within the EC (and outside it). Unless changes are made to coordinate taxation in this area, or reporting to national tax authorities, we may find the tax base for DIRT eroded. If coordination is successful, along the lines suggested by the EC Commission last year, we could find our tax base increased and revenue from this source of taxation increased. Developments in this area will also affect the taxation of the investment income of financial institutions which currently pay little tax in Ireland. It is difficult to know what will be the final outcome of the current EC wide debate on this area of taxation.

All the evidence suggests that if customs barriers are to be completely dismantled at the end of 1992 there will have to be a much greater harmonisation of indirect taxes across the EC[9]. The precise nature of the harmonisation remains to be determined. If the original EC Commission proposals were implemented it would mean the imposition of VAT on food while excise taxes, especially on alcohol, would be drastically cut. The effects of such a change on the distribution of income could be adverse. However, the effects on individuals and families would depend very much on the importance of alcohol in the individual household budget.

Such a change in taxation could also give rise to problems within families. To the extent that the purchase of food and other household goods is undertaken by one partner in a family out of a fixed budget, while the other partner spends a significant amount on alcohol, the tax change could affect the distribution of resources within such families. It would require an increase in the food budget and a reduction in the household's alcohol budget. Because we know little about the pattern of budgeting within families it is difficult to say what the effects of such a change in tax would be on members of individual families. However, it is likely that if rates of indirect taxation underwent drastic change in any one year it could cause significant problems.

However, the EC Commission appear to be moving away from their original proposals though it is not clear what will be the eventual agreement within the EC. Whatever the end result, it is certain that it will involve a significant loss of revenue for the Irish exchequer. The Department of Finance are currently talking about a loss of over £600 million or around 3 percentage points of GDP. Clearly this will have major implications for the development of the Irish tax system in the next five years.

While the EC Commission in their *White Paper*[10] of 1986 sought a harmonisation of corporate tax systems as part of the preparations for *1992*, little progress has been made since then. Even if this issue is pursued in the next few years it is certain that the existing low corporate tax rate in Ireland will be allowed to the end of the century.

However, it might be in Ireland's interest to encourage a greater harmonisation of corporate tax regimes in Europe. If all tax systems, with the exception of the Irish 10% rate, were levelled upwards by eliminating all other special write-offs, it could enhance the attractiveness of Ireland by ending wasteful competition on incentives between member states of the EC. It would also raise the revenue from this source of taxation in Ireland and elsewhere. Whether or not such coordination takes place in the future, as a country charging low taxes on companies, we still have considerable freedom of action to vary our company tax structure.

4 The Tax System and the Economy

As in all developed economies there is a very complex set of relationships between the tax system and the distribution of income. The economy never stands still to allow one to make

9 Fitz Gerald J., 1989. "The Distortionary Effects of Taxes on Trade in Border Areas: The Case of the Republic of Ireland - United Kingdom Border", ESRI Memorandum Series No. 183.

10 European Commission, 1985. *Completing the Internal Market*, June.

marginal changes in taxes. Any significant change in taxes will set in train a complex chain of events which will indirectly affect all aspects of the economy. If the economy would only stand still it would be a relatively straightforward exercise to work out the income distribution effects of, for example, a change in income tax bands. However, people react to tax changes by changing their behaviour. They may well be able to pass on some of the costs (or lose some of the benefits) of any tax change to other individuals or companies. While, as discussed above, the openness of an economy increases the magnitude of the possible indirect effects of tax changes, even in a closed economy such effects are very important.

For example, a cut in the rate of income tax costing £100 million might be expected to raise personal disposable income by that amount. However, as after tax income rises the demand for higher wages may ease, increasing profits. In other words some of the benefits may accrue to companies. Companies may in turn react by expanding and employing more people or they may compete, driving down prices, and passing the benefits on to consumers. Thus the benefits of a tax cut could be shared by the initial recipients, companies and their owners, those who find employment in the newly created jobs, and consumers. These indirect or dynamic effects of changes in tax rates may be very important in changing the distribution of income.

Changes in income taxation (or pay-roll taxes) affect the disposable income of the personal sector in the economy. They also cause individuals and groups in the personal sector to change their attitude to bargaining for wage increases. Using a macro-economic model we can examine these effects at an aggregate level.

Changes in company taxation will affect companies behaviour. It will affect whether they choose to produce in Ireland or elsewhere. Depending on how the tax is levied it may also affect the amount of capital they use in production and the number of people they will choose to employ in Ireland. For example, extensive incentives to invest make it cheaper to replace employees with machines in the production process.

Indirect tax changes will firstly affect prices and, through them, the spending power of individual incomes. For example, a cut in the tax on alcohol might be partly absorbed into higher profits by manufacturers and partly passed on to consumers in lower prices. To the extent that it is passed on to consumers the spending power of their incomes will be raised[11]. This in turn will lead to higher consumption. Such a tax cut would also affect the proportion of income that goes on alcohol. A cut in the price of alcohol could be expected to lead to a rise in alcohol consumption. If the cut in the price of alcohol were compensated for by a rise in the price of food then the consumption of food might fall. Depending on the proportion of food and alcohol respectively which are imported this change could affect domestic output and employment.

Thus the issues which need to be considered in arriving at the economic and income distribution effects of tax changes are the incidence of any particular tax - who pays it (or benefits from it), and how those affected by it react to the change. In this Section I consider only the macro-economic effects of changes in taxation. More detailed micro-economic research is needed to answer the many questions which arise concerning the effects on individual workers, consumers etc.

In this Section I have used the ESRI *HERMES* macro-economic model[12] to examine the impact of a change in income tax costing £125 million as well as a change in social welfare payments of £100 million financed by a rise in income taxes. (The *ex-ante* increase in income tax has to be greater than that in transfers to ensure self-financing.)

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11 It is estimated that about 80% of the benefits are passed through to consumers. See Bradley J., J. Fitz Gerald, D. Hurley, L. O'Sullivan and A. Storey, 1989. *HERMES-Ireland: The EC Medium-Term Policy Model of the Irish Economy: Structure and Performance*, forthcoming, ESRI.

12 ibid.

Figure 4

EFFECTS OF INCREASE IN TAXATION

WAGE RATES AND PRICES, % CHANGE

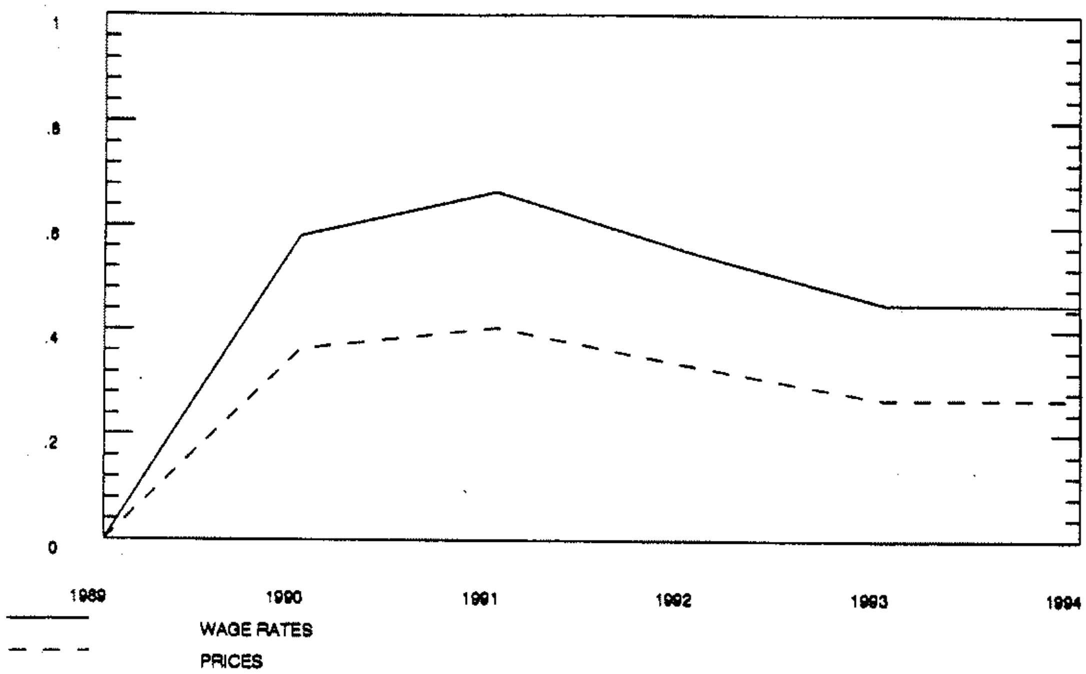


Figure 5

EFFECTS OF INCREASE IN TAXATION

INDUSTRIAL SECTOR, % CHANGE

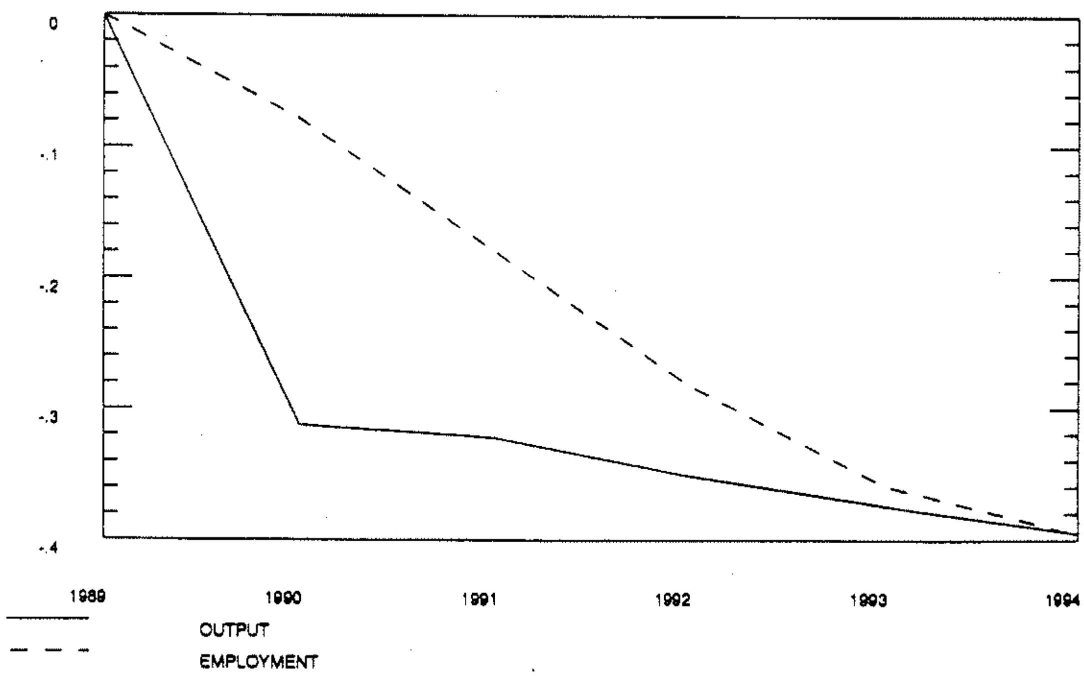


Figure 6

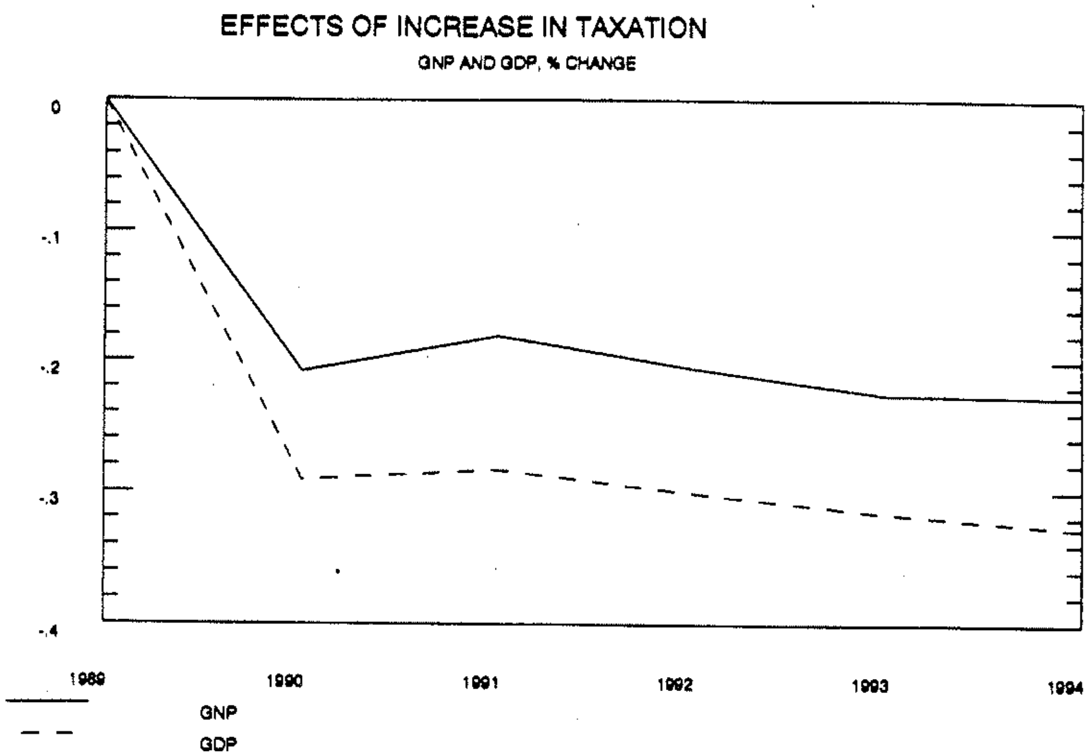


Figure 7

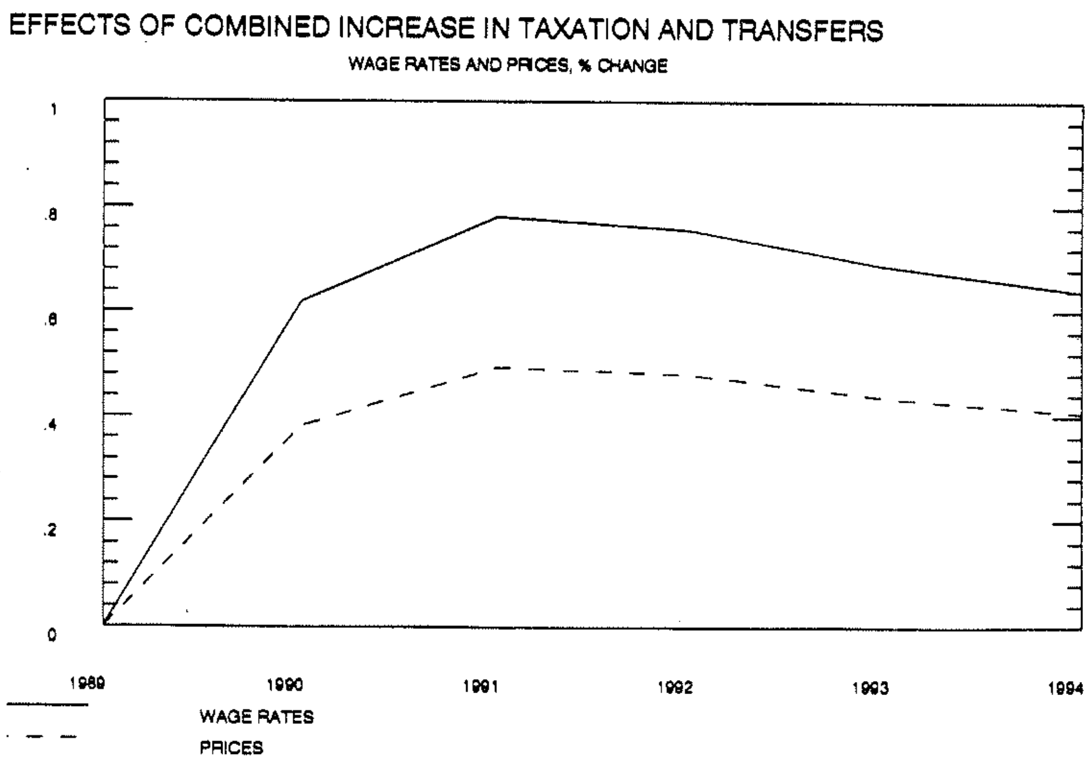


Figure 8

EFFECTS OF COMBINED INCREASE IN TAXATION AND TRANSFERS

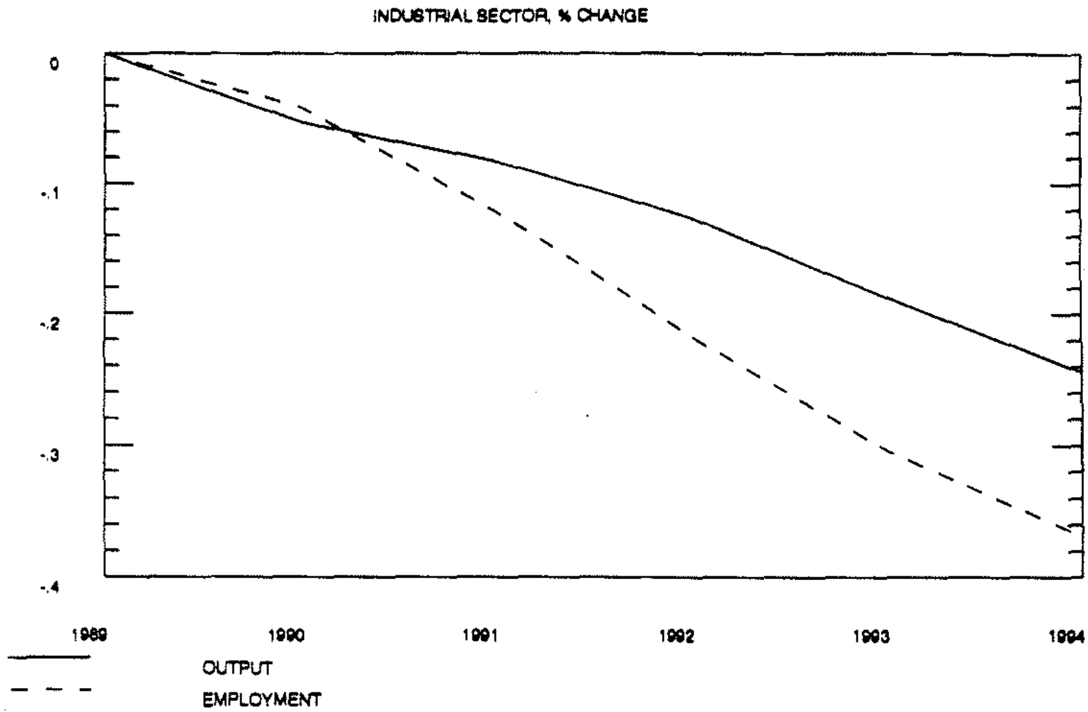
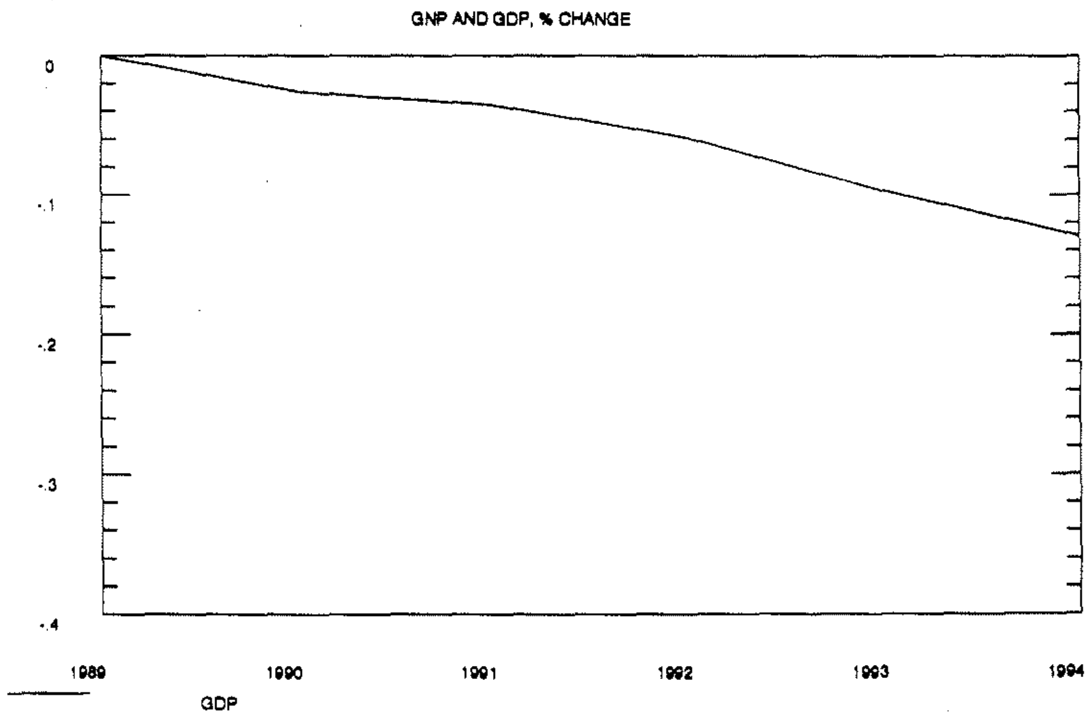


Figure 9

EFFECTS OF COMBINED INCREASE IN TAXATION AND TRANSFERS



This model takes account of the reaction of employees to changes in their after tax incomes; the reaction of companies to changes in profitability; the effects of changes in income on spending and domestic demand; and the effect of changes in borrowing on government debt and interest payments.

4.1 Change in Income Tax

Using the model the effects of raising revenue from income tax by £125 million are examined. The change is assumed to take place in 1990 and revenue is held above its benchmark level by a fixed £125 million indefinitely. (The results would be similar in magnitude, though with opposite signs, if taxes were cut by £125 million.) This shows what the effects would be of a tax increase (or failing to reduce taxes). In this simulation it is assumed that the revenue raised is used to repay debt.

As can be seen in Figure 4, the first effect of the tax increase is that employees seek to offset their losses by raising wage rates. In 1990 wage rates would rise by 0.58 per cent more than they would have without such a shock. By 1991 the level of wage rates would be 0.67 per cent above the benchmark. The rise in wage rates feeds into prices of home produced goods raising the price level by 0.36 per cent in 1990. Of course this feeds back into wages.

The effect of the rise in wage rates is to cut industrial profitability and to reduce competitiveness. As shown in Figure 5, the level of industrial output falls by 0.31 per cent and industrial employment falls initially by almost 250 (0.08%). However, as firms adjust to the changed competitiveness the job losses increase to around 1,300 (0.4%) in industry in 1994. There are also significant job losses in the services sector as demand falls due to the tax increase. By 1994 total employment is reduced by around 3,000.

The effects on GDP and GNP are rather different. Figure 6 shows how GDP is reduced permanently by 0.33 per cent while GNP in 1994 is reduced by 0.23 per cent. The difference is due to the fact that the repayment of debt reduces foreign debt interest payments and the reduction in industrial profits reduces profit repatriations. In the very long run (i.e. 20 years) GNP is actually raised by the tax increase as the saving on foreign interest payments cumulates.

What this simulation highlights is the fact that raising taxes, or failing to reduce them, reduces competitiveness and, therefore, employment. This cost must be offset against the benefits which accrue from the spending of the increased revenue. In this example the revenue is invested in debt repayment.

4.2 Tax Increase Offset by Increase in Transfers

In a second simulation the effects of a simultaneous sustained increase in welfare payments amounting to £100 million financed by raising income taxes was examined. Because of the loss in revenue from other taxes and higher expenditure from an increase in unemployment it would be necessary to raise revenue from income tax by around £125 million to ensure that there was no net exchequer cost from the package (i.e. no change in the Exchequer borrowing requirement).

While the increase in transfer payments offsets the demand effects of the tax increase it does not offset the negative impact on competitiveness so that the volume of GDP falls by 0.13% by 1994 (Figure 7). The employees who pay the taxes continue to seek higher wage rates in spite of the fact that the higher taxes are used to fund higher transfers (Figure 8). The effect of this assymetry is to reduce industrial employment by 1,200 (0.37%) and industrial output by 0.24 per cent by 1994 (Figure 9).

In terms of the effects on the distribution of income the transfer of resources from income tax-payers to social welfare recipients would be bought at the cost of 1,500 less jobs in the economy as a whole. Some of those affected by the job loss would emigrate while some of them would add to the dole queues. There would also be adverse effects for those not in a position to partially offset the rise in prices by raising their nominal incomes. The rise in prices also reduces the value of the increase in welfare payments to something over £80 million in real terms. In weighing up the effects of such a policy change the adverse dynamic effects arising from the loss of employment and higher prices must be offset against the redistribution of income achieved.

This exercise is intended to illustrate the problems facing policy makers in this area and the magnitudes and timing of the effects could be very different in practice. What it does show is the importance of the reactions of those liable to changes in taxes in determining the economic effects. If income tax payers were to embrace with open arms a tax increase and not seek recompense for loss of purchasing power through higher pay, then the results could be very different. However, past experience indicates that the model is a reasonable representation of the behaviour of the Irish economy over the last 20 years.

4.3 Other Effects

While the model has allowed for some of the possible reaction of tax-payers, it has, perforce, to treat the matter at a very aggregate level. The tax increase simulated is very stylised and does not take account of detailed labour market effects. For example, if the tax increase occurred through a reduction in allowances it would reduce the difference between working and being unemployed which could increase the adverse effects on employment of the change. Alternatively, if levied on returns from institutional savings (such as life assurance funds) it might be less likely to lead to higher prices and pay rates and, as a result, have less adverse employment effects than shown in the above simulations.

The model used here is not sufficiently sensitive to differentiate between the dynamic effects of different kinds of taxes. Thus alternative evidence must be used in considering whether changes in taxation should be effected by changing income tax, social welfare contributions, indirect taxes, company taxes or property taxes.

5 Conclusions

So far this paper has concentrated on the constraints, current and future, domestic and foreign, which limit our freedom to use the tax system to redistribute income. However, some of these constraints are not necessarily binding. In other cases the direction in which we are being pushed is the route we might want to travel. It is still possible to make significant changes in the distribution of income by means of the tax system. While some of the changes will have social and economic costs, these costs may be an acceptable price to pay for the redistribution achieved. In other cases, changes in the tax system which are desirable for economic reasons may result in a significant redistribution of income.

The tax system is only one aspect of a complex set of policies which together alter the distribution of income. While this paper concentrates on the role of the tax system, it must be clearly understood that the tax system alone can not achieve a major redistribution of income. However, it is equally true that it must be part of any policy of redistribution. This concluding Section discusses a range of tax reform measures which would have minimum undesirable side effects (or might even have additional benefits) and which would tend to redistribute income. However, without measures to deal with the problems of the long-term unemployed and without reform of the social welfare system these tax changes will not be very effective. As such, this Section does not set out a fully integrated programme of changes but rather gives a number of suggestions as to the direction in which the tax system should be changed. These changes broadly follow the spirit of the *Commission on Taxation*. Their effect would be to somewhat reduce the overall burden of taxation in the next five years.

The parameters within which any changes in the tax system in the medium-term must be framed are:

1. There is scope for, at most, a very limited cut in tax revenue in 1990 and 1991.

2. Once the current inflationary pressures ease, probably from 1992 onwards, there will probably be scope for some further cuts in tax revenue and/or increases in expenditure.

3. *1992* will necessitate a shift from current indirect taxes to other taxes in the medium term.

Any proposals for tax changes must take account of the need to fund the changes in indirect taxes which *1992* will necessitate. While the cost of the eventual package which may be agreed may fall below £600 million, it is likely that there will be a fall in revenue of between 2% and 3% of GNP to be made good. The original EC Commission proposals involved an extension of VAT to food. Taken on its own this change would adversely affect poor families. However, it is still not clear if this change will take place in the face of UK opposition.

Uncertainty about the nature of the final package to be agreed and the wide range of changes which it will involve makes the income distribution effects of the package less certain. However, if VAT does go on food, even if benefits are raised to compensate those on social welfare, these benefits will not compensate those at work on low rates of pay. The final effect of this EC indirect tax package, while generally reducing the tax burden, will probably be adverse in terms of the distribution of income. Much will depend on how the lost revenue is made good.

Research for Ireland[13] indicates that considerable efficiency gains could be obtained by using the imposition of a property tax to fund a reduction in other taxes. A property tax has a number of economic advantages in addition to those quoted by Honohan and Irvine. Because of the immobility of the base, it will cause a minimum of distortion post *1992*. Once set up, it is difficult to evade; houses are easy to detect! Initial problems in terms of compliance may be got round by collecting the revenue through the existing income tax system. While evidence is not at present available on the distribution of personal property holding by income, it can be assumed that these two measures of welfare are correlated and such a tax is likely to be progressive. This effect can be strengthened if provisions are made for exempting low income households[14].

This tax could bring in over £300 million. (Depending on the treatment of mortgage interest relief in the income tax system, it might be necessary to make allowance for mortgages in calculating liability from property tax.) If household rates had been maintained at their real 1977 level they would to-day be bringing in over £200 million. The proceeds of this extension of the tax base should be wholly devoted to reforming the income tax system.

In the case of income tax the Commission on Taxation recommended that all income, whatever the source, should be brought into the tax net. This would involve the taxation of capital transfers and capital gains as income; of lump sum payments made as part of retirement or redundancy deals; of income from short term social welfare benefits; of children's allowances; the ending of the BES scheme; the ending of the Section 23 provisions on rental income. Existing tax reliefs on life assurance premia and health insurance premia should be abolished.

Tax free allowances should be converted to non-payable[15] tax credits. The difference between tax credits and the current tax free allowances is that credits would be worth the same to tax-payers whatever their income whereas tax free allowances are worth most to those in the highest tax brackets.

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13 Honohan, P. and I. Irvine, 1987. "The Marginal Social Cost of Taxation in Ireland", *The Economic and Social Review*, Vol. 19 No.1.

14 The interaction of such exemptions with the income tax and social welfare systems would have to be taken into account to avoid unintentionally high effective marginal tax rates, as emphasised in Nolan B., T. Callan, 1989. *Direct Taxation and the Poor in Ireland*, paper presented to this conference.

15 If the tax credit is greater than the tax liability no refund is made.

The savings from these changes, from the introduction of a property tax, and the changes in company taxation, suggested below, would provide a substantial budget for tax reform. The question then arises as to how this budget should best be spent in changing the tax system. It would simultaneously permit a major reduction in marginal tax rates and the implementation of a wide range of possible objectives on the distribution of income.

Work in the UK[16] indicates that marginal tax rates could affect behaviour of those on the margins of the labour force, generally with low earning potential. This would argue on economic efficiency grounds for using some of the money to remove a substantial number of low income tax payers from the tax net[17]. The evidence in Callan, Hannan, Nolan, Whelan, and Creighton, 1988, indicates that some of those living in poverty are paying tax so that such a change would also have positive redistribution effects. It would also go some way to compensating those on low incomes for the adverse effects of any increase in VAT on food. Finally, it would tend to reduce pressure for increases in wage rates, helping to increase the numbers employed in the longer term.

Some of the budget would also have to go to reducing the marginal rate of tax for tax-payers on higher tax bands. The tax package would also tend to benefit young skilled workers on relatively high starting salaries who tend not to be major property owners. They would benefit from a reduction in marginal tax rates while escaping the property tax liability. This should, if anything, reduce the incentive for such skilled workers to emigrate.

The centre-piece of Irish industrial policy since the 1950s has been the reduced or zero rate of corporation tax. This has been a major factor underlying the relatively small share of GDP collected from the company sector in Ireland. The Irish industrial sector has evolved over a long period around this policy. As a result, it would not be possible, to change this aspect of the Irish tax system for existing firms before the end of the century without dislocation.

In the light of the unsatisfactory results achieved by this policy in the past[18], it is indeed surprising to see it now being applied to the financial services sector through the special provisions for firms locating in the Customs House Docks. This provision is contrary to the approach of the Commission on Taxation and the recommendations of many economists concerning such an approach when applied to industrial policy. Unless the vast bulk of business availing of this provision is new business from abroad there is a grave danger that a further significant chunk of our corporate tax base will disappear into a *blue lagoon* on the Liffey. Even if there is an extensive take up by foreign financial service firms the net benefits to the Irish economy may well be very small, given that this business will be founded on the basis of transfer pricing and profit repatriations.

The combination of the dual rate corporate tax system and the generous provision of capital allowances has, over time, given rise to a range of distortions and loopholes, substantially reducing the revenue from corporate taxes. The growth of leasing and *Section 84* loans has allowed the financial sector to share in the benefits of the low industrial tax rate, at substantial cost to the exchequer. In other countries in the 1980s there has been a move towards a simpler corporate tax structure with somewhat lower tax rates but higher tax yields arising from an elimination or reduction in allowances.

16 Murphy, A., 1987. "Taxation, Labour Supply, Employment and Unemployment", Paper given to a Conference organised by the Foundation for Fiscal Studies, September.

17 or, possibly, to change the social insurance system.

18 Ruane, F., 1983. "Industrial Development", *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XXIV, 1982/3. National Economic and Social Council, 1982, Report No. 64 and 1986, Report No. 83.

What is needed is a reform of the corporate tax system along the lines originally suggested by the Commission on Taxation. This would result in an increase in revenue from this source of tax bringing Ireland closer to the practice of all our EC partners. Such a change would, in the long run, affect the investment income of the owners of the company sector.

The taxation of investment income (e.g. of life assurance companies) remains a major problem area. In an earlier paper I showed that the amount of tax paid on such incomes was very low[19]. However, as indicated above in Section 3, the openness of the Irish economy poses some limitation on independent action in this area of taxation. While it would obviously be preferable to see an EC wide approach to this problem it is still possible to take some independent action to ensure a more equitable level of tax revenue. The current beneficiaries from this loophole in the tax system are the owners of life assurance policies and members of pension funds. It is likely that the effect on the distribution of income of a reform in this area of taxation would be progressive.

The range of tax changes set out above is not a menu from which one can choose at will to achieve a desired distribution of income. They must be combined carefully to ensure that their interaction does not produce unexpected and undesirable economic or income distribution effects. As indicated earlier in the paper, policy makers face major constraints on their freedom of action. To the extent that these constraints stem from the openness of the economy the solution must lie at the EC level. To the extent that they arise from economic behaviour, such as the reaction of tax-payers to taxes, they are technically within the control of the community. However, experience suggests that the reaction of tax-payers to tax changes which hurt them is usually adverse. They try and recoup their loss through higher wage demands or higher prices.

This paper shows that redistribution of income through the tax system may have significant economic costs. However, given the existing structure of the Irish tax system, it is possible to reform it in such a way as to minimise or even reduce these costs while, at the same time, achieving some change in the burden of taxation.

19 Fitz Gerald, J., 1988. "Proposals for Reform", paper presented to the *Foundation for Fiscal Studies* pre-budget conference, 21-1-1988.