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TAXATION AND EMPLOYMENT IN IRELAND

by

Brendan M. Walsh

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The Policy Paper series of the Centre for Economic Research consists of preliminary reports on policy-oriented research carried out by members or associates of the Department of Political Economy, University College Dublin. All opinions expressed are those of the contributors and do not necessarily reflect the views of other members of the Department. A list of other publications of the Centre is given at the end of this paper.
In the time available to me this morning I shall try to set the stage for a discussion of taxation policy, with particular reference to employment and growth in Ireland. I shall start by summarising some relevant aspects of our recent economic performance. I shall then review briefly how the level of taxation in Ireland compares with that in other countries in the OECD. The core of my talk consists of a summary of the available research findings, for Ireland and other countries, regarding the manner in which tax levels, and changes in tax levels, affect employment, unemployment and economic welfare. This is a long and formidable agenda and I am very conscious that it will be difficult to do justice to these topics in the time at my disposal.

We are all well aware that the Irish economy has performed very badly indeed during the 1980s. The level of real GNP is lower today than it was at the start of the decade. The population has grown by about 3 per cent, but the number at work has declined by about 7 per cent. The rate of unemployment increased from 7 per cent in 1979 to over 18 per cent this year. Since 1983 net emigration has been at an annual rate of about 1 per cent of the total population, or three per cent of the labour force. A consequence of this is that our population is now stationary or possibly even declining, despite the fact that our rate of natural increase is still the highest in Europe.

These are absolute measures of the dismal performance of our economy since the onset of recession in 1979. Initially it was at least possible to console ourselves with the thought that the rest of the
western world was also in deep recession and suffering on much the same scale as we were. But in recent years this has been increasingly less true, as first America and then Britain and some other countries began to recover vigorously from the recession. The contrast between Irish and British economic performance since 1983 has been particularly striking. In Britain output has expanded rapidly since 1983, employment has been growing since 1984, and unemployment has been falling since 1986. Higher real government expenditure has been reconciled with a declining share of public consumption in GDP and the public sector borrowing requirement has been virtually eliminated even when allowance is made for the effects of privatisation on the figures. The tax burden is now falling significantly. The contrast in terms of job creation has had a direct impact on Ireland, because large numbers of our young people have been attracted to Britain by the recovery in the labour market at a time when the level of employment continues to decline in Ireland (Chart 1).

It is natural that among the possible explanations for Ireland's poor performance the role of taxation should receive a good deal of attention. In the first place, there is widespread discontent with the level and structure of taxation in Ireland. While similar discontent is evident in other countries, in none has it reached the level of protest that was experienced in Ireland in the late 1970s and early 1980s. The result has been the emergence of a political consensus to the effect that the steep upward trend in the overall tax burden that was such a striking feature of the late 1970s and early 1980s had to be halted and
if possible reversed. Despite the growing resistance to the expenditure cuts that are a corollary of this, there is no evidence of any greater willingness to shoulder higher taxation. On a more analytical level, the Reports of the Commission on Taxation documented the crazy-quilt pattern of incentives, allowances, exemptions and rates in our tax system and made a convincing case for reform. Reform, however, has not occurred. Against this background, there is at least a suspicion that the level of taxation, and the structure of our tax system, are among the reasons for our deteriorating economic performance.

I would like to present some international comparisons of the tax burden, even though such comparison have a limited value. Chart 2 shows the overall tax burden in Ireland, using the relatively crude measure of the ratio of total tax revenue to GDP in 1984. (The statistics are from the OECD Revenue Statistics and slightly different statistics can be obtained from other sources.) It may be seen that at 39.9%, the Irish figure lies in the upper half of the international league table, well above the level recorded in Japan and the USA, at one end of the spectrum, but also well below the found in the Scandinavian countries and Belgium. In this Chart, however, I have followed the OECD convention of using Gross Domestic Produce in the denominator. In Ireland the wedge between domestic and national product is larger than in any other OECD country. The outflow of interest and profits to the rest of the world now amounts to 11 per cent of GDP, and these payments do not form part of the Irish tax base, so that the use of GDP in the denominator significantly understates the effective tax burden in the case of Ireland. If the comparison were made with GNP in the
denominator, the overall tax burden in Ireland would rise to over 44 per cent, and only Sweden and Denmark would rank higher.

Economies take time at adjust to major changes such as a large increase in the level of taxation. It is therefore important to consider how the tax burden has changed in recent years, as well as looking at its present level. It may be seen from Chart 3 that Ireland was surpassed only by Italy and Spain in terms of the relative increase in its tax burden since 1978. 3 (The growth of the wedge between GDP and GNP affects this comparison. The growth in the tax/GNP ratio was larger in Ireland than in any other OECD country.) The developments of the late 1970s and 1980s moved Ireland from a relatively modest rank in the international tax league table into the company of a small group of countries, all at much higher levels of income per person, in which the tax burden was already very high in the 1970s. Moreover, in many of the highly-tax countries, notably the United Kingdom, but also in Scandinavia and Germany, the level of taxation is now being reduced significantly, while in Ireland the slight reduction that occurred in 1985-6 has been not been maintained. This year the tax/GNP ratio has risen again and it is now back at its peak level.

(These comparisons are crude. They do not take account of variations in the size of the tax base relative to the whole economy. The Irish tax system exempts large sectors from any significant tax burden. A corollary of this is an increased burden on the sectors that are not exempted. This results in increased levels of taxation of categories of income that are liable to tax. It is more difficult to make
detailed international comparisons of tax burdens to illustrate this point, but a recent OECD study [5] provides estimates of the marginal tax rate on production workers at various levels of income. (Income and social insurance taxes are included, but no account is taken of indirect taxes and the manner in which they reduce the purchasing power of "disposable income"). From Chart 4 it may be seen that on this index Ireland was in fifth place in 1983, significantly ahead of Germany, France, Britain and the USA. Since 1983 Ireland will have moved closer to the top of this league table.

Indirect taxes are also relatively high in Ireland and they are also levied selectively on a relatively narrow base. The contrast between Ireland and other member states of the European Communities in this regard was the topic of last year's Conference, so I shall not dwell on it today. Suffice it to say that the openness of our economy makes it extremely costly to have higher rates of indirect taxes in Ireland than in Britain, a fact that was acknowledged in this year's budget by the introduction of restrictions on the freedom of movement of goods across our borders. These restrictions are clearly inconsistent with our commitment under the Single European Act to work for a "Europe without frontiers". They may be deemed illegal by the European Court. If left in place they are likely to lose effectiveness with the passage of time. Thus, there would seem to be no way of avoiding the costs of high indirect taxes in a small country such as Ireland.

I think I have said enough to establish the relatively uncontroversial propositions that taxes in Ireland are high, that they have increased
rapidly during the 1980s and that they are far from uniform across sectors or groups in our economy. The issue for discussion this morning however is the economic effects of these features of our fiscal system, and in particular the implications for employment, unemployment and economic well-being. This issue is both controversial and complex. It is the subject of a very rapidly growing, and increasingly technical, economic literature, particularly in Britain and America. I am fortunate in being able to draw on several recent surveys of this literature, including one commissioned by the Foundation for Fiscal Studies, in my summary [2, 4, 6].

Taxation affects the labour market both on the demand side and on the supply side. These effects occur because taxation drives a wedge between the costs incurred by firms in hiring labour and the after-tax purchasing power of the wage received by employees. This wedge consists of social insurance taxes (PRSI), income taxes and indirect taxes. One of the relatively uncontroversial propositions in the economics literature is that, whatever the legal or social significance of the distinctions between these taxes, in the long run their effects on the labour market are very similar. Economists attach relatively little importance to what proportions of this wedge consist of direct or indirect taxes, employer or employee levies: what matters is the size of the gap between the cost of hiring a unit of labour, on the one hand, and the purchasing power of the wages received in terms of goods and services, on the other. The growth of this wedge, and its components, in Ireland since 1978 is shown in Chart 4, which is taken from the OECD
Economic Survey of Ireland, 1984/5. It may be seen that the wedge increased by 25 per cent between 1979 and 1984.

The effects of this wedge and its growth on the labour market are complex. In analysing them we have to start from economic theory, or first principles, which can shed some light on the nature and likely direction of the effects. Then we must turn to the statistical evidence to try to estimate the magnitude of these effects. Both the theoretical study and the empirical investigation of labour markets have developed very rapidly in recent years. On the theoretical front, it is recognised that we should allow for the interaction of trade unions and employers as well as the competitive interplay of supply and demand in the labour market. On the empirical front we are aware of the difficulty of coping with complications arising from the growth of the unrecorded economy and the importance of migration in a country such as Ireland.

Let me try to summarise how economists analyse the effects of the tax wedge on the labour market. The first question that has to be answered is: "Who actually bears the burden of the tax?". The incidence of a tax cannot be decided by looking at who is legally responsible for handing over the money to the Collector General. For example, an increase in income tax would be passed back to employers if the supply of labour happens to be very elastic. This is because under these circumstances any reduction in the after-tax income of the employees would lead to a sharp fall in the availability of workers, and employers would have no option but to respond by increasing the pre-tax pay of their labour force. As is often the case, the basic insight can be found in Adam
Smith, who wrote in *The Wealth of Nations*

The recompense of ingenious artists and of men of liberal professions . . . necessarily keeps a certain proportion to the emoluments of inferior trades. A tax upon this recompense, therefore, could have no other effect than to raise it somewhat higher than in proportion to the tax. If it did not rise in this manner, the ingenious arts and the liberal professions, being no longer on a level with other trades, would be so much deserted that they would soon return to that level. [Book V, Chapter II, Part II, Article III]

On the other hand, the ability of employers to raise wages in response to tax increases depends on how easily they can pass this increase in costs on to their customers, which is the main factor in the elasticity of demand for labour. The interaction of these two forces can be summarised by saying that the higher the elasticity of supply relative to the elasticity of demand for labour, the smaller the proportion of the labour tax wedge that will be borne by labour, and the larger the proportion that will be borne by the owners of capital. In Ireland the propensity to migrate among qualified workers is high, and this would increase the elasticity of labour supply. This means that these categories of workers have to be paid a real, after-tax wage that matches what they could earn abroad. Thus instead of accepting a reduction in after-tax income when tax rates are increased, such workers are likely to pass the higher taxation on to employers. However, the ability of employers in the traded sectors of the economy to pass on cost increases by raising their prices is very limited because in general they have to accept prices set on world markets by firms that are not affected by Irish tax increases. Thus, it is likely that under Irish circumstances both demand and supply elasticities are high. This
means that the effect of tax increases will be shared relatively evenly between higher costs to employers and lower net income to employees.

If it is indeed true that the two relevant elasticities are large, then it follows that any widening of the tax wedge will lead to a relatively large fall in the level of employment compared with the situation where the supply and demand for labour are relatively inelastic. This general prediction from economic theory is at least consistent the broad trend of events in Ireland since the late 1970s when, as we have seen, a major increase in the tax wedge was accompanied by a significant decline in employment both in absolute and relative terms.

It is important to distinguish between the effects of a general reduction in taxation and a revenue-neutral restructuring of taxation. A revenue neutral restructuring of taxes would lower marginal tax rates on high incomes but recoup the loss of revenue by raising some other taxes rates. This type of reform would alter the rewards from work at the margin but would not lower the overall burden of taxation. There would be a pure substitution effect, which unambiguously increases the supply of labour. A reduction in marginal tax rates that was part of an overall tax-reduction package, on the other hand, would contain both income and substitution effects, and since the former is in general oppositie in direction from the latter, the combined effect would be smaller.1

In order to estimate the magnitude of the effect of changes in the tax wedge on the level of employment and unemployment, we must turn to the available statistical evidence. It is helpful to consider the impact on
the supply and demand sides of the labour market separately. To the extent that the tax wedge reduces the after-tax income of those in employment it may affect the labour supply behaviour of the population. The changes in after-tax income may influence the decision to enter the labour force and seek employment (the participation decision), the decision to accept a particular job offer or to continue seeking employment, and the number of hours that are worked in a particular job. There are complex interactions between the tax and social welfare systems, and between the decisions of different members of the same household, especially husbands and wives whose tax liabilities and social welfare entitlements are interdependent. In Ireland, all these decisions may also be influenced to a greater or lesser extent by the availability of jobs, and the level of after-tax income other countries, especially Britain and America. It would be a brave economist indeed who would claim that (s)he has been able to capture all these potential effects in a single study!

Earlier studies of how taxation affected people's willingness to work were mainly of the interview type and the responses obtained generally led economists to believe that most people had relatively little discretion about whether to work or not to work, and if working, about how many hours in the year they could work. This literature looks somewhat naive today and has been superseded by a vast outpouring of

The compensated elasticity of labour supply is relevant for estimating the effects of a revenue-neutral tax reform, but the uncompensated elasticity is relevant in assessing the impact of a reduction in taxation that leads to an increase in after-tax income. Economic theory suggests that the compensated elasticity will be larger than the uncompensated one, and the evidence supports this.
much more elaborate studies. These "second generation" studies are based on the actual behaviour of individuals, as revealed in various household/labour force surveys. Microeconometric techniques have been developed to measure the effects of changes in after-tax income on labour force participation and hours worked. It is now accepted that this type of very detailed analysis is required if the impact of very complex tax systems on the behaviour of individuals is to be estimated with any accuracy.

In Ireland little research of this nature has been undertaken. The detailed information on hours worked, wages and taxation that has facilitated such studies in other countries is simply not available to researchers in this country. We have therefore to rely on the findings reported in studies undertaken in other countries. While there may be special considerations that should be taken into account in Ireland, such as the traditionally low level of labour force participation by women, and the importance of agriculture in the economy, we can have some confidence in the relevance to Ireland of the main conclusions in the international literature in view of the consensus has begun to emerge regarding the most important issues in this field.

The conventional wisdom used to be that those with a primary commitment to the labour force (i.e. "prime age males") were relatively unresponsive to changes in after-tax income. It is still accepted that women, teen-agers and those close to retirement age are more responsive to changes in after-tax income than are "prime age males". More recent studies, based on detailed microeconometric evidence, have, however, led
to a substantial upward revision of the estimates of supply response by males. A recent Swedish study, for example, estimated that a revenue neutral flattening of the income tax rate schedule to achieve a 34 per cent proportional tax rate would increase adult male labour supply by almost 7 per cent [1]. For the labour force as a whole, there is now some agreement that high marginal taxes result in significant reductions in the amount of labour supplied. A recent OECD survey concludes that

Although it is important not to assign too much weight to individual results derived from what are relatively new, and certainly complex, econometric models, most recent studies support the view that aggregate labour supply is sensitive to changes in taxation. If research continues to substantiate these results, concern about the adverse labour supply effects of taxes will grow still further. [2, p. 74]

Turning to the demand side of the labour market, we can say that to the extent to which the tax wedge tends to increase the cost of hiring labour, it has a depressing effect on the level of employment. This effect, which is likely to be greater in the long than in the short run, comes about in two ways. In the first place, the more expensive labour is, the less of it employers will wish to use to produce a given level of output. They can economise in their use of labour by replacing it with other factors of production, notably capital, in the production process. In many countries, Ireland among them, the tendency for taxes on labour to make labour dearer has been reinforced by capital grants, subsidies and allowances that make it less expensive to use capital. A recent OECD survey of the impact of taxation on the use of capital and labour clearly show that Ireland is exceptional in the anti-labour bias
of our tax system as a whole [5]. A recent survey of the international evidence on the magnitude of this substitution effect concluded that

\textit{at the macroeconomic level there seems to be significant scope for substitution between labour and other factors of production. The elasticity of substitution has been estimated in the range 0.6 to 1.0} [4, p. 25].

The distortion of relative factors costs by taxes and subsidies may also affect the type of firm that is attracted to Ireland. The second way in which increases in taxation could affect the level of employment is through the effect of any increase in local costs on the international competitiveness of the traded sectors of a small open economy. The higher cost structure facing domestic producers leads to a reduction in the level of output they can sell on home and international markets in competition with foreign producers that have not faced a similar deterioration in their costs. This fall in the level of output will lead to a reduction in the level of employment. In Ireland it is obviously important to take this effect of increased taxation into account in view of the exceptional rate of increase in the tax wedge that has occurred in this country since the end of the 1970s. According to the econometric evidence reviewed by Murphy for the Foundation, the best estimate of the magnitude of the combined substitution and output effects on employment is that a one per cent increase in the cost of labour reduces the level of employment by about 0.8 per cent [6].

Thus, higher taxation reduces the supply of labour and the demand for labour. This will unambiguously reduce the level of employment. But whether it raises the level of unemployment depends on the relative
magnitudes of the two effects. If, for example, supply contracted by more than the fall in demand, there could even be a fall in unemployment. In his study for the Foundation, Murphy attempted to do this. He concluded that a one percent increase in the tax wedge leads to a fall of between 0.2 and 0.25 per cent in the level of employment and a rise in unemployment of between 0.15 and 0.19 per cent. On the basis of these results, the 25 per cent increase in the tax wedge that has occurred since 1979 would have led to a fall of about 5 per cent in the level of employment and an increase of about 3.75 percentage points in the level of unemployment.

These effects of taxation are not trivial. They indicate that the growth of taxation in Ireland should be counted among the factors that have contributed to poor performance of the economy during the 1980s. But it has to be acknowledged that on the basis of these estimates the increase in taxation is not responsible for the bulk of the rise in unemployment or the decline in employment that has occurred. Nor does the evidence support the cruder versions of "supply side" economics, according to which a simple reduction in taxation would release a vast outpouring of energy and enterprise and go a long way towards solving all our problems. However, it may be plausibly claimed that tax reform would make a significant contribution to raising our flagging rate of economic growth.

The analysis takes no account of what is done with the increased tax receipts. In evaluating this aspect of our experience, it has to be recalled that since the late 1970s most of the increase in tax revenue
in Ireland has gone on servicing the rising level of the national debt, paying increased transfer payments and higher levels of public sector pay rather than on direct employment creation. The combined effects of increasing tax revenue and government spending have been evaluated in an applied general equilibrium framework in a recent paper by Honohan and Irvine [3]. The authors present estimates of the "deadweight" costs of taxation in Ireland, by which they mean the amount by which the loss of economic welfare due to increases in taxation exceed the increase in tax revenue. They conclude that

Our estimates of deadweight losses from raising taxes in both labour and commodity markets give figures ranging from well in excess of $1 per $ of additional tax revenue...even the lower estimates are extremely high.

The reason why these losses may be so great are that tax rates in Ireland are very high and distortionary. Any proposal to spend money that has to be raised through additional taxation must therefore bestow social benefits amounting to as much as $2 per $ spent if it is to make the population better off. If we accept this, then it follows that reductions in taxation, matched by reduction in spending, are likely to leave the population better off. This is the economic rationale for a long-run strategy of reducing the overall burden of taxation. In the short-run, tax reforms designed to reduce the dispersion of effective tax rates between different categories of labour, capital and goods should be pursued because they would help to reduce the magnitude of the deadweight loss attributable to our tax system.)
Although much of the empirical evidence regarding the magnitude of the benefits that would follow from these changes is tentative, and as always there is room for much further research, the case for including these policies as an important element of overall strategy for economic recovery in Ireland is very strong indeed.


