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CONCLUSIONS

Chapter 10 in
The fiscal system and the polluter pays principle: a case study of Ireland

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10 Conclusions

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We have now completed our sector by sector examination of the fiscal system in Ireland and how it impacts upon the environment through the incentives it creates. We have also made a range of recommendations as to how the system can be altered so that the Polluter Pays Principle is applied more intensively and extensively, thus providing incentives for environmental protection. In Chapter 3 we outlined why we are promoting this approach to environmental policy, in contrast to the more traditional regulatory approach.

In this concluding chapter, we will bring our recommendations together, in two main groups. First, we will present those recommendations which we believe (a) to be the most readily implementable and (b) to have the greatest potential for a significant environmental impact. Second, we will present those recommendations which should form the basis of additional reforms in this area, once the initial steps have been taken. In the case of each proposal, our concern is that households and enterprises will face the environmental costs of their actions and so will take these costs into account in making consumption and production decisions.

10.1 The primary recommendations

10.1.1 Agriculture

In order to tackle the serious problem of eutrophication of surface waters from over-application of nutrients (such as fertilisers) and insensitive management of manure, the main recommendation in agriculture is that VAT, or a similar tax, be imposed on fertiliser and feed. This would have neutral revenue effects, in so far as VAT paid is rebated, one way or another. Small farmers would be compensated through higher flat-rate rebates, such that only relatively fertiliser-intensive farmers would be worse off. Large farmers who are registered for VAT (and number about 2000) would receive the rebate. In order to increase the effectiveness of this measure, it would be ideal if the rebate could be made subject to a nutrient management balance being provided and be made payable in relation to good nutrient management. The VAT system already requires information on inputs and outputs, so that little extra documentation would be required. In this way excess nutrients can be taxed. Some alteration to the VAT rebating procedure would be required, but this may be a less serious obstacle than those confronting every other proposal made to date to alleviate this pressing problem. Failing such an alteration, an additional charge could be raised on fertilisers, which would be refunded on the evidence of good nutrient management. The procedures could vary according to the sensitivity of the region.

10.1.2 Environmental services

We considered environmental services (i.e. water supply, waste water, and solid waste) provided by local authorities and used by households, commerce and industry. In general, these services are being under-priced, leading to over-use and wastage, and consequent excess pollution damage to the environment. Present levels of cost recovery (capital and current costs combined) are roughly 54 per cent for water supply, 8 per cent for waste water, and 23 per cent for solid waste. While at present the EU is paying a large share of the capital costs of water supply and waste water services, and will continue to do so until the end of this decade, capital costs will have to be funded domestically beyond that date.

It is recommended that full cost recovery be gradually implemented, where feasible by means of volume-related charges, to recover both operating and capital costs of the three services. Charges that might cover some of the external (environmental) costs relating to these services could also be considered.

The effect of volume-charging could be considerable in that households and enterprises would have an incentive to reduce their generation of solid waste and waste-water and to economise on their use of water. We would foresee the effect as being particularly strong in the long run. We recommend that full cost recovery would be phased in over about 10 years, and that this should be announced and implemented immediately.

The evidence suggests that the incentive effects of use-related charges on quantities of the services demanded would bring environmental benefits. There will also be implications for government finances, at both local and central level. It is proposed that we move from a system of paying for services through general taxes, to one of paying for them by user charges. Tax revenues which would have been used to provide environmental services would be released for other purposes, such as reducing other taxes. Full cost recovery will save local and central government some £271 million per annum, at future cost levels (after allowing for increases in social welfare to compensate low-income households, this might become £214 million). A landfill levy in addition could bring in an extra £15 million annually. Finally, surveys referred to in Chapter 2 indicate that the public prefers to pay for improved services this way, rather than through increased general taxes.

10.1.3 Energy

In the energy sector, we recommend the following as priority measures.

- 1 VAT on heating fuels and power should be raised from the reduced rate of 2.5 per cent to the standard rate of 21 per cent, with compensating social welfare payments. The net revenue yield could be £45 million, after the expected 2½ to 4½ per cent decline in consumption compared to what it would have been.
- 2 An energy tax along the lines of the EU's proposed carbon tax should be introduced unilaterally and gradually adopted in Ireland, as the rate of tax appears to be of the right order of magnitude by reference to estimates of damage costs of energy use, even though these estimates relate to other countries. The introduction should be simultaneous with an enhanced

programme for aiding efficient energy use on the part of those who cannot afford to undertake energy saving investment. A decline in energy use of some 3 per cent is forecast, but the on-going and predictable encouragement to technological development should bring further savings. Total revenue from the carbon tax of nearly £700 million is foreseen, after diverting a part of the funds to aid low-income households. According to the results of the ESRI's Medium Term Model, if the revenue from the carbon tax is used to reduce PRSI contributions, there is a net gain to the economy and to industry in particular.

10.1.4 Transport

Our primary recommendations with respect transport relate specifically to the air pollution associated with road transport. We recommend the following.

- 1 Increase the tax advantage of less polluting fuels, especially cleaner forms of diesel and possibly natural gas (e.g. for fleets); this would be paid for by increasing the tax on regular fuels.
- 2 Give grants for the retro-fitting of catalytic converters, for LPG conversion, and possibly for conversion to natural gas; this would be paid for by increases in car tax on cars without catalytic converters, and increases in the price of fuel.

10.1.5 Revenue implications

Although we are not primarily concerned with raising revenue but rather with environmental protection, it is of interest to consider the revenue implications of the proposals. Looking only at our proposals with respect to environmental services and energy, we can see that the revenue implications are considerable. Under environmental services we foresee eventual revenue of around £200 million added to the present revenue from charges; increased VAT on heating fuels and power could yield £45 million; a carbon tax could yield around £700 million. In total, these three measures could yield over £900 million in the long run.

10.2 Secondary recommendations

10.2.1 Agriculture

The use of pesticides in agriculture can impose social costs not recognised by the farmer. This puts an obligation on the authorities to monitor behaviour and inform farmers about best practice. Inasmuch as there is a built-in tendency to over-apply agri-chemicals, their sale should be subject to a charge, the proceeds of which should be applied to cover the costs of monitoring and education. There are no net revenue implications.

There is also scope for using a tendering process for bio-diversity conservation in some instances. Where a species, habitat or eco-system is under threat, farmers could be invited to tender to preserve them. In this way, more protection for a given cost will be achieved.

10.2.2 Forestry

The potential for bestowing external benefits lies in the carbon sequestration of trees, provided that they are not planted on peat soil where net sequestration may be zero or negative. If the EU's proposed rate of carbon tax (the part relating to carbon only) were applied in reverse manner as a grant for carbon sequestration, the amount payable might be some £38 million per year. Another external benefit which could be subsidised is the provision of habitats for wildlife by mature forests, and broadleaved forests in particular. These two annual subsidies would sum over five years to over £200 million, which is roughly the intended expenditure under the present afforestation subsidy programme for 1994-1999. As the afforestation expenditure appears set to continue in some form beyond the five years, these two subsidies to carbon sequestration and to habitats, should be substituted for the existing programme.

10.2.3 Energy

- 1 The SO₂ and NO_x quotas allocated to Northern Ireland and the Republic should become tradeable between establishments. In addition to encouraging the search for least-cost methods of abatement, this would achieve the specified targets at minimum cost.
- 2 Subsidies and grants to households and enterprises for energy conservation will not be so necessary with the carbon tax in place, as the tax will generate the incentive for the installation of conservation measures. However in order to encourage economies of scale and to combat lack of information and inertia which may prevent the realisation of the external benefits associated with energy conservation, some state aid may be justified.

10.2.4 Transport

Returning to air pollution related to road transport, consideration might be given to moving from a cubic capacity-based road tax to one based directly on fuel efficiency.

In addition to air pollution, we identified other problems related to road transport and made the following recommendations:

- 1 While more research is needed to ascertain the viability of anti-congestion measures (such as road pricing) in an Irish context, in the meantime, the costs of urban parking should be increased, through increased on-road metering, perhaps (partially) basing local authority rates on the number of parking spaces on a premises, and removing the tax benefits for building multi-storey car parks.
- 2 With respect to damage done to the road transport infrastructure, the most important step here would be to change the tax on heavy goods vehicles to one based on laden weight per axle and distance travelled. This may require an EU-wide approach however.

- 3 If it is not possible to internalise all the costs of other modes of transport, there is a justification for measures to encourage the use of public transport. One possibility is to make commuting by public transport a tax deduction; this could be paid for by increasing the road tax on cars. In addition, we would recommend that the current rebate on fuel tax for public transport be replaced by some form of subsidy, since the present arrangement discourages fuel efficiency.
- 4 If it is possible under EU regulations, it is desirable that all costs related to vehicle maintenance be subject to a uniform low rate of VAT. At present most maintenance services are subject to the low rate of VAT, while car parts purchased separately are subject to the standard rate. This anomaly may disadvantage low-income car owners, who might be more likely to do their own maintenance. The change of itself would encourage more maintenance, which would in part pay for the measure. The introduction of mandatory vehicle testing for private cars, due at the start of 1998, will generate more of a market for maintenance services, which will also generate more tax revenue. Any shortfall in revenue could be made up by increased road tax, petrol tax or vehicle registration tax.

As for the air transport sector, there are many uncertainties about the external damage caused by air travel, and these would need to be resolved before strong recommendations could be made about fiscal measures. The main areas of concern, both in an international and Irish context are air pollution and noise. In the meantime, it would seem appropriate to introduce increased fees on noisy aircraft in advance of research, since we know that some damage is being caused. For the same reason a tax on air transport fuel is also justified. International action is required before this could be implemented, but the Irish government could lend its support to EU moves in this direction.

10.2.5 Tourism

Tourism pressures on the environment arise from the need to build additional facilities to cater for tourists and from the tourists themselves in terms of the congestion they create and the damage they do. They also put pressure on environmental services at certain times and so generate a standard peak load problem. In the case of tourist facilities for which charging for admission is possible, we recommend imposing charges at least at peak times. This will alleviate congestion problems. Similarly, a higher charge for environmental services should be imposed where tourist pressures are intense. If this higher charge is passed on to tourists in the form of higher accommodation charges, it will provide an incentive for visits to be spread away from the peak time. Finally, in areas where environmental damage occurs because of large tourist numbers arriving at a certain time, a higher tax on accommodation in the high season, balanced by a lower tax in the low season, might help to spread tourists over time and thus relieve congestion and the damage associated with large numbers.

10.2.6 Construction

In the construction sector, environmental damage can occur when new buildings intrude on either a scenic landscape, or when new buildings do not fit in with existing structures. The demolition of existing buildings is also environmentally damaging if those buildings were of some merit, be it historical, cultural or whatever. Renovation on the other hand can improve the appearance of a building, and hence an area, and also reduces the need for new construction. In general then, the tax code should not create incentives to build as opposed to renovate and, if a bias is to exist, it should be towards renovation. As such, we recommend that stamp duty apply to all houses and that the exemption for new houses be abolished. We also think that the first-time buyers grant should be abolished or that it should apply to all and not just new houses. Grants and reliefs for renovation should be extended, especially in the case of listed buildings. Given the nature of construction, however, and in particular its somewhat irreversible nature, the task of environmental protection should fall primarily on planning laws, supported rather than thwarted by economic instruments.

10.3 Additional issues

A number of points should be made in closing which are relevant to most of the issues raised and recommendations made. The first of these points is that much more information is needed in this area if economic instruments for environmental protection are to be used to greatest effect. This information requirement exists along a range of dimensions so we will outline them in turn.

- 1 As discussed in Chapter 3, the ideal environmental tax requires a knowledge of the value of the damage that is the focus of the tax. Without valuation of the damage, the extent to which the damage should be reduced and hence the optimal level of the associated tax are simply guesses.
- 2 Even if we know the level to which emissions and pollution should be reduced, we need to know the extent to which agents will respond to taxes and charges before we know what level of tax will achieve the required reduction. Putting this in more economic terms, we need to know the elasticity of emissions with respect to the tax.
- 3 In order to estimate properly the revenue implications of the reforms we propose, more precise information on the levels of the activities is required. It is only when we know precisely what the tax base is that we can know what the revenue from a given level of tax might be.

These three dimensions of the information issue all call for more research in this area. Another dimension to the information issue is somewhat different, but it is still important. All the proposals we have made assume to a degree that people have the required information that will allow them to respond to environmental taxes and charges; we assume that people know what the 'green' products and processes are towards which they can substitute. Clearly, this may not always be the case and so there is an important role for government in providing information, given the scale economies involved and the fact that information, once discovered can be provided cheaply to all.

In addition to information, there are other conditions which need to be met if markets for 'green' products and services are to function efficiently. Industries of a more innovative nature may experience difficulties in raising capital due to the uncertainties surrounding their potential for commercial success. Also, the existence of monopolies and cartels leads to the restricted provision of goods and services. In either case, there may be a role for government in ensuring that a market for alternatives operates freely, again so that substitution towards them is possible.

As a final point, many actions which seek to bring about environmental improvements are best pursued at an international level, given the transboundary nature of much pollution. The proposals which we made with respect to, for example, air pollution should be implemented nationally but efforts should also be made to promote similar policies at an international level. Unilateral action related to taxes and charges will always be hampered by national concerns that competitiveness will suffer if additional costs are imposed on domestic industry while industry elsewhere is left free of the same taxes. As we discussed in Chapter 3, cost disadvantages resulting from environmental taxes can be offset through other types of subsidies. However, it would be preferable if the competitiveness concern could be dealt with through international implementation of the Polluter Pays Principle so that a level playing field in international trade is maintained alongside increased environmental protection.

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