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Sustainable Development: The Role of Taxation

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The Government has set out ambitious targets for reducing greenhouse gas (GHG) emissions in its recent Climate Action Plan (Government of Ireland, 2022), including halving overall GHG emissions by 2030 and reaching net-zero emissions by 2050. The starting point for this paper is that it is difficult to see how these emission reduction targets can be achieved without radical reform of the taxation system. I set out some directions for reform that would leave the system better positioned to contribute towards emission reduction while ensuring sufficient revenue is raised to finance the necessary expenditure, drawing on economic research and the recent report of the Commission on Taxation and Welfare (2022).

Transport is one area where tax reform is particularly required, with €4-5 billion of revenues at risk as we decarbonise personal and commercial transportation (Parliamentary Budget Office, 2021). This is because all the main taxes on driving are closely linked to emissions of vehicles. For example, Revenue (2023) statistics show mineral oil tax – an excise duty on petrol and diesel – has raised around €1.5 billion per year in recent years, but this will dissipate relatively quickly over time (along with the associated VAT revenue) as electric cars replace those powered by an internal combustion engine.

Vehicle Registration Tax (VRT) is also closely linked to the emissions of vehicles, as Figure 1 shows. This plots the rate of VRT that applied in 2022 against the measured C02 emissions per kilometre of a vehicle, with the rate – charged as a percentage of the (estimated) open market selling price of a vehicle – rising with measured emissions. Save reform, revenues from VRT – which Revenue (2023) statistics show raised €941 million in 2019 – will decline as more vehicles fall into the lower-taxed 0-80 grammes of C02 per kilometre range of the schedule, and fewer in the higher-taxed 150+ gramme per kilometre range. Decarbonisation of the fleet of vehicles on the road will have a similar effect on the revenues raised by motor tax.

There are also other strong non-climate reasons for reforming the taxation of transport. As highlighted in the report of the Commission on Taxation and Welfare (2022), existing motoring taxes are poorly targeted at the largest social cost of driving: congestion. Estimates from the European Commission (2019) suggest that Ireland faces among the highest congestion costs in the EU, something that electrification of vehicles will do little to address. A sensible direction for reform here is the introduction of time and location dependent road-pricing in the medium run, which could be introduced in such a way as to leave hauliers, taxi drivers and rural motorists financially better-off while enabling the continued raising of revenue from driving as other taxes evaporate.[2]

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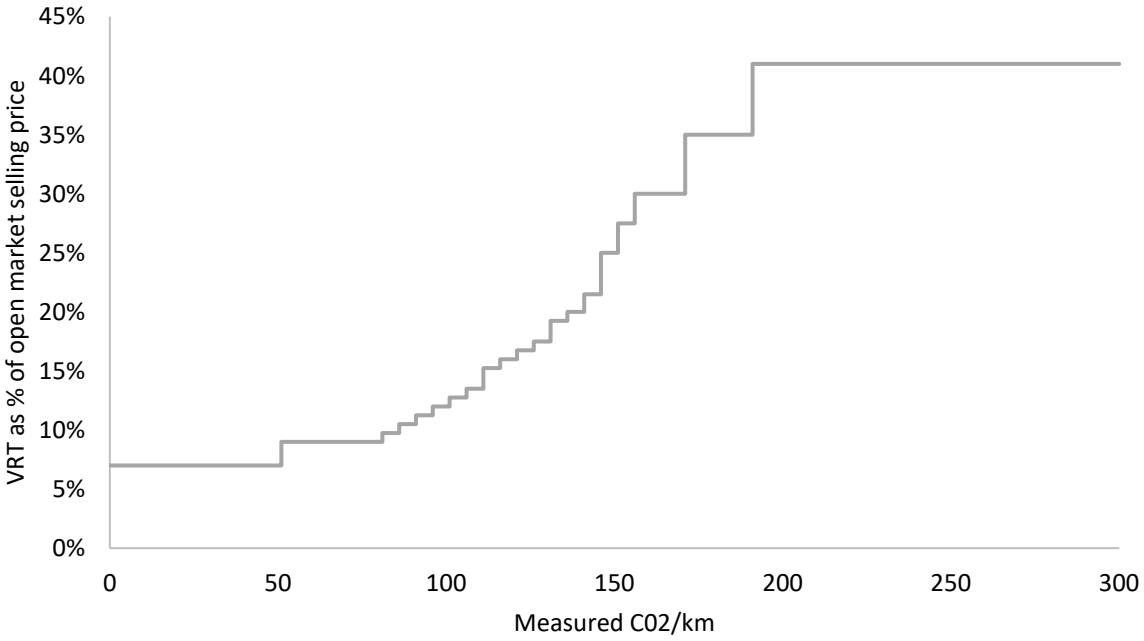
[2] See Adam and Stroud (2019) or Lynch and Roantree (2023) for further discussion of such a reform.

Figure 1: Vehicle Registration Tax schedule, 2022



Source: Author's calculations using information from www.revenue.ie

Another area where radical tax reform is required is addressing the inconsistent pricing of carbon across sources and users, which makes decarbonising the built environment more difficult (and expensive) than it need be. For example, the price of carbon in sectors and uses covered by the European Union Emissions Trading System (EU-ETS) is currently significantly higher than those covered by the domestic carbon tax, while the opposite has been true in the recent past. This problem is further compounded by the presence of free allowances and reliefs for certain large or favoured users, as well as by the differential treatment of household and business users through the Public Service Obligation (PSO) levied on electricity (but not gas) bills.

Analogous inconsistencies in the cost of carbon abatement are being created by policy measures designed to encourage the utilisation of certain energy saving technologies. For example, while solar panels now enjoy a zero VAT rate, other energy-saving measures like heat pumps, insulation, and triple glazed windows are subject to a 13.5% VAT rate regardless of the potential they may have to yield higher energy savings. Likewise, the subsidies available through grants for energy-saving initiatives exhibit significant variation across technology type in a way that is difficult to justify. Grants are effectively provided for the purchase and installation of equipment and materials irrespective of the net energy efficiency outcome, leading to significant variation in the level of grant aid provided relative to the energy efficiency improvement gained. Indeed, Colins and Curtis (2017) found that over the five years of the Better Energy Home scheme, grant aid per unit energy efficiency improvement ranged from €0.62/kWh/m2/year to €4,545/kWh/m2/year with a mean of €20.96/kWh/m2/year. Such substantial variation in the subsidies available for energy saving technology reduces the effectiveness of these subsidies, increasing the cost of achieving the Government's targets for decarbonising the built environment.

So too does our current system of property and land taxation, particularly through the design of Commercial Rates. This applies to non-residential property at a rate determined by local authorities (the Annual Rate of Valuation), levied on an estimate of the annual net rental yield of a property (the rateable valuation) by the Valuation Office. As this rateable valuation is based on the rental value of a property, a denser development will attract a higher valuation and so Commercial Rates liability than a less dense development, with this density penalty reinforced by the existence of reduced rates for vacant property and surface level car parking spaces (Commission on Taxation and Welfare, 2022).[3]

The result is that Commercial Rates discourages density and encourages sprawl, making it harder to meet the Government's ambitious targets for reducing emissions from the built environment and transport. For this reason,

[3] Furthermore, Commercial Rates represents the taxation of an intermediate input – commercial property – with the associated distortionary impacts on economic activity (Mirrlees et al., 2011).

among others, the Commission on Taxation and Welfare (2022) recommended replacing Commercial Rates with a Site Value Tax that would apply to all land and property – including agricultural land – not subject to the Local Property Tax.[4] Such a reform would incentivise the more efficient use of land because a site would attract the same amount of tax whether a one-story or ten-story building was built on it, encouraging greater development of underutilised sites. However, the stronger incentive to develop such sites and its ultimate impact on density – and so emissions – will be mediated by land use and planning laws, an important determinant of housing supply (Lyons, 2015).

Reforming the taxation of land and property will not be uncontroversial or easy, not least removing the distortionary exemption of agricultural land from property tax. Neither will the other reforms described above, nor other issues not discussed here on the international tax agenda such as the proposed EU Carbon Border Adjustment Mechanism and ending the preferential tax status of aviation and maritime fuel (Keen et al., 2013). However, failing to do so means that tax policy will continue pulling in the opposite direction of climate policy, making it harder still to meet our ambitious emission reduction targets.

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[4] Other reasons given by the Commission for recommending a Site Value Tax that would subsume Commercial Rates include dampening the level and volatility of land prices, providing a more stable source of revenue than property transaction taxes, and raising greater revenue from wealthier households.