Evaluation of climate change mitigation policies in Ireland's transport sector

1. Sectoral overview

Ireland's transport emissions remain stubbornly coupled to economic activity. Between 1990 and 2018, greenhouse gas emissions from transport increased by 137.1 percent. Road transport accounts for the majority of these emissions. Aviation and maritime emissions are not a central focus of this study due to the fact that these emissions sources are dealt with through other European and/or global policy mechanisms. Emissions from aviation within the EEA are covered under the EU Emissions Trading Scheme, while other international aviation emissions are covered under a recent global agreement concluded within the framework of International Civil Aviation Organization. Maritime emissions are being addressed within a process under the auspices of the International Maritime Organization.

2. Policies and measures in place

Policy instruments in the sector can be divided in the categories of regulation, economic and fiscal instruments, information and education, and investment.

Regulation: The principal regulatory measures employed in the transport sector include EU regulations that govern average emission performance of vehicles and the Biofuels Obligation Scheme. EU Regulation 443/2009 set CO_2 emission performance standards for new passenger cars. The Biofuels Obligation Scheme aims to progressively increase the share of biofuels in the fuel mix. The Scheme requires that road transport fuel suppliers must ensure that biofuels represent a certain percentage of the motor fuel they place on the market.

Economic and fiscal instruments: The Carbon Tax was introduced in December 2009 and is currently €20/tonne CO_2. Initially applied only to motor fuels, it was extended in 2010 to other non-solid fuels, and was extended to solid fuels in 2013 and 2014.

In 2008 the Vehicle Registration Tax (VRT) and Motor Tax regimes were reconfigured to support reducing CO_2 emissions. Consumers are also incentivised in the purchase of EVs through grants as well as favourable treatment through the VRT and Motor Tax regimes. The EV Grant Scheme, administered by SEAI, provides consumers with a grant of up to €5000 towards purchase of a new EV. EVs also qualify for €5000 relief from VRT. Since the beginning of 2018, a €600 grant is available to home owners to install a home charging point. The Accelerated Capital Allowance (ACA) is a tax incentive scheme that promotes investment in energy efficient products & equipment

Information and education: A range of programmes have been established to promote low carbon and sustainable travel through education programmes. These include the Green School Travel programme, the Smarter Travel Workplaces Programme, and the Smarter Travel Campus programme. Other initiatives such as the Smarter Travel Areas pilot programme include an education/behaviour change component as part of the overall programme, though most of the funding was targeted at infrastructure investment.

Investment: Between 2002 and 2013, roads expenditure accounted for an average of 64% of DTTAS expenditure on land transport, with public and sustainable transport accounting for 36%. This gap has narrowed in recent years, but this took place in a context of a sharp decline in overall expenditure on land transport. In 2018 the spending allocation is made up of 56% on roads, 44% public transport and 0.3% sustainable transport. ESB has rolled out a national charging infrastructure for EVs. A Green Public Transport Fund of €2.5 million was established in 2017 to support pilot demonstrations of emerging low emission technologies, particularly buses and also focusing on taxis.

3. Evaluation of existing policies

Effectiveness: Absent a sectoral emissions pathway, it is difficult to know against which benchmark to assess the effectiveness of policies in the transport sector. Evaluating effectiveness against the intermediate policy goal of modal shift, patterns are stable with a heavy dominance of private car based transport. Walking remains the second most popular

mode of transport at 14.6% of all journeys in 2016. Cycling increased slightly from 1.2% in 2012 to 1.7% in 2016. The Biofuels Obligation Scheme has been effective in displacing a limited quantity of fossil fuels in transport. Recalibration of the VRT and Motor Tax regimes brought about a significant shift in consumer behaviour.

Efficiency: Efficiency is an evaluation criterion that can more easily be applied to individual policy measures rather than to a sector as a whole. When evaluating a specific policy instrument, it is easier to quantify the effects and costs of the policy, though challenges can arise in this respect. If it were possible to quantify the effects and costs of the range of policies implemented in the transport sector, then we could develop a sector-wide assessment of the relative efficiency of different measures within the overall policy mix. However, that task is outside of the scope of the current project, though it could be undertaken in future research.

Relevance and coherence: Policies have predominantly dealt with passenger transport and have neglected freight. While passenger transport accounts for a majority of GHG emissions from the sector, the freight transport sector has grown once again during the recovery, and emissions from freight transport increased by 7.5% in 2016. Although some policy measures, such as the Biofuels Obligation Scheme, apply equally to passenger and freight, the relevance of the overall policy mix could be enhanced. Increasing use of biofuels in the transport sector may also lead to incoherence between climate mitigation and other policy goals such as biodiversity protection food production, if not managed carefully.

Distributional impacts: Across the income spectrum, there is relative consistency in terms of expenditure on transport. Transport demand is relatively price inelastic, particularly where people live long distances from their place of work or education and in areas that are poorly served by public transport. In this context, transport demand management policies have distributional consequences.

Governance: Three key challenges characterise governance of the transport sector. First, the sector is inherently complex, with tensions between public and private, rural and urban, and complex external interactions with planning, health and education systems. Second, contestation between institutional priorities has shaped the development of a carbon intensive transport system to date. Third, the governance landscape is highly fragmented.

4. Recommendations

Low carbon transport vision: A first key step is to elaborate a low carbon transport vision that aligns fully with best international practice, including fully embedding the "Avoid, Shift, Improve" hierarchy of policy goals (EEA 2016). Ireland's transport vision ought to promote a zero carbon transport future.

Top-down direction from government: High-level signalling from government is critical to facilitating transition. It provides certainty to investors and confidence to society. This includes leadership from the Department of Transport, Tourism and Sport to guide the plethora of transport institutions that operate under its remit. It should be underpinned by a whole-of-government approach and enhanced policy coordination that prioritises climate action.

Bottom-up experimentation and peer learning: Peer learning between Irish villages, towns and cities will be imperative to scale up innovative low carbon transport solutions. This would introduce a much-needed level of reflexivity into the system and allow low carbon transport innovations to be tested, compared and revised accordingly in local conditions. Dedicated resources, communication channels and engagement fora will be important for success.

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