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Deep trouble

Can green taxes save the planet?



Can green tax



save the world?

Oceans full of plastic, holes in the ozone layer, cities blanketed in smog... Can green taxes and incentives change our habits and help to save the planet?

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A 'trash island' stretches between southern Mexico and Honduras. We have donated the cost of this image to Roatan Marine Park, which works to clear rubbish from the ocean. You can do the same at www.roatanmarinepark.org, or donate to the global initiative Plastic Oceans at plasticoceans.org



Carbon-pricing schemes aim to ‘internalise’ the costs of future environmental damage by putting a price on carbon pollution

world,” the index states. “Whether due to the Paris Agreement or other factors, there has been an increasing number of tax policy changes in the sustainability space.”

War on carbon

One key trend has been the rise of carbon-pricing schemes. These aim to ‘internalise’ the costs of future environmental damage by putting a price on carbon pollution. Governments can opt to put a carbon tax on the sale or use of fossil fuels to encourage businesses to switch to renewable energy, or introduce a market-based approach to controlling pollution known as ‘cap and trade’ – the most famous example being the EU Emissions Trading System (ETS; see box overleaf).

Since 2012, the number of carbon-pricing instruments around the world has almost doubled, with 42 national and 25 sub-national authorities putting a price on carbon emissions, according to the World Bank. Its report, *State and Trends of Carbon Pricing 2017*, found that revenues from carbon-pricing schemes now top \$20bn (£14.9bn).

Ask any economist if green taxes can save the planet and they’ll probably reply that it’s an impossible question to answer. Part of the challenge is that environmental taxes and incentives come in many forms, covering different policy areas such as carbon emissions and climate change, renewable energy, sustainable transport, green buildings, waste and food. Globally, this makes for a constantly evolving, complex and somewhat fragmented fiscal landscape – and one that’s hard to map.

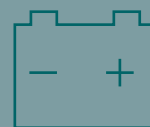
But politicians, economists and environmentalists feel that progress can be made. And they know that, to get people to change their habits, you have to understand their behaviour; tax and incentives need to hit the right psychological notes.

The *KPMG Green Tax Index* provides one of the best guides to what works and what doesn’t. It outlines various environmental regulations across 37 countries, and attempts to determine their effectiveness.

The index notes that climate change increasingly features as a factor in tax policy decisions. “The use of tax policy to drive green behaviour continues to grow throughout the

GREEN SCHEME

ELECTRIC VEHICLE SUBSIDIES



Various purchase rebates and tax exemptions exist for plug-in electric vehicles (EVs) around the world. In Norway, pure electric and hybrid cars account for over 50% of new car sales, and EV drivers receive benefits such as free city parking and no road toll charges. Such user incentives can encourage mass EV adoption, says Viktor Irle, market analyst for EV-Volumes.com: “It’s expensive to travel in Norway if you have a petrol car – you could easily incur road toll costs of €50 a day.” As uptake of EVs increases and they become cheaper to buy, these incentives are likely to disappear. Irle predicts that EV subsidies will be replaced with some form of tax.

GREEN SCHEME

THE PLASTIC BAG LEVY



The plastic bag charge, now in force across the UK, requires retailers to charge customers 5p for each single-use plastic carrier bag they request. Strictly speaking, the charge is not a tax as the revenue doesn't go to the government – instead retailers donate the proceeds to charities of their choice. The government estimates that over the next ten years, the law will raise up to £730m for good causes, save £60m in litter clean-up costs, and generate carbon savings of £13m. One criticism is that the proceeds aren't being used to help fund better recycling infrastructure. "I think the government was hoping more of the funds raised would be targeted at environmental projects," says Trewin Restorick, chief executive of Hubbub.

"There is growing interest and momentum for carbon pricing, and as countries see what others are doing they are more inclined to investigate the option themselves," says Mark Johnson, carbon markets business manager at environmental consultancy Ricardo. Whether carbon pricing becomes universally adopted remains to be seen – Johnson says it's not that easy to establish new pricing systems for much of the economy. "Ultimately, carbon pricing will not be seen as suitable by every government for every sector."

One challenge facing economists is what price to put on carbon, and whether that value should reflect the social cost of climate change impacts, which is subject to many uncertainties, or be based on the cost of achieving a desired policy outcome, such as achieving emission-reduction ►

"The UK's 5p plastic bag charge showed that people were willing to change their behaviours and legislation can have an impact"



Trewin Restorick,
chief executive
of Hubbub

targets. Figures suggested by experts range from \$40 to \$250 per tonne of carbon (£30 to £190), making it tricky to reach a consensus.

“Rather than focusing on the perfect carbon price, economists should be seeking to identify how to design good tax policy assuming a carbon price somewhere in the middle range of the authoritative estimates – say \$100 (£75) per tonne – rather than the below \$10 (£7.50) per tonne prices that characterise many carbon-pricing and trading schemes,” says Dustin Benton, policy director at the thinktank Green Alliance.

According to Benton, carbon pricing has largely failed because the price has been set too low: “It’s failed to change investment decisions or to spur R&D efforts from either the private or public sector.” The exception to this, he says, is the UK’s Carbon Price Support mechanism, which adds an extra £18 per tonne to the ETS price, and which he feels has affected business behaviour. “It has been set just high enough to advantage existing gas plants over existing coal plants in the UK’s electricity market.”

Johnson believes carbon pricing can act as an efficient economic incentive for decarbonisation,

GREEN SCHEME

EU EMISSIONS TRADING SYSTEM



The EU ETS is the world’s largest scheme for trading greenhouse gas emission allowances, operating in 31 countries and covering 45% of EU emissions. It caps the amount of carbon dioxide emitted by businesses; within this limit, companies can receive or buy emission allowances from one another. Effectively, companies pay a price for the carbon they emit, and the cap is reduced over time so that total emissions fall. However, many economists feel the price set is too low. “Carbon pricing in the EU via the ETS has not proven an effective tool, mainly because the prices have never been high enough to drive significant change,” says the Green Alliance’s Dustin Benton.

Dustin Benton,
policy director at
the Green Alliance

“Prices under the EU Emissions Trading System have never been high enough to drive significant change”



but says it doesn’t address many of the needs for substantial long-term emissions reduction. “Consumer awareness and decision-making is one of these areas,” he points out. “It would be wrong to think that other complementary measures aren’t needed.”

People power

These complementary measures could be monetary-based, such as subsidies for installing solar panels on roofs or purchasing electric cars. Other government interventions proving increasingly popular across Europe are charges for single-use plastic carrier bags and deposit-return schemes for drinks packaging, to encourage less wasteful habits among shoppers.

But what works best when it comes to driving public behavioural change: the carrot or the stick? “Indications are that a tax can have a more profound impact than an incentive,” says Trewin Restorick, chief executive of Hubbub, an environmental charity. He points to the success of the 5p carrier bag charge in the UK, which has led to around an 80% reduction in the number of plastic bags being handed out by retailers.

“A deposit-return scheme needs to be made easy, with convenient drop-off and recycling sites, or people won’t take part”

Although the charge has achieved its primary objective, Restorick doubts it has actually done much to raise awareness of plastic waste – the BBC’s *Blue Planet* series has been far more effective in galvanising public opinion on the issue. “What the charge did do was to demonstrate that people were willing to change their behaviours and that legislation could have a rapid impact,” he says.

Likewise, money-back schemes have been instrumental in increasing recycling rates for empty cans and bottles in those countries that have adopted them. One of the most successful examples is Germany, where only a tiny percentage of non-reusable bottles aren’t returned for recycling. Deposit-return schemes can increase recycling rates to over 90%, but must be designed well as they are expensive to implement.

“A deposit-return scheme needs to be made easy for people, with convenient drop-off and recycling sites; otherwise they are less likely to take part and the bottles may be taken



Michelle Carvell,
chief operating
officer of Lorax
Compliance

GREEN SCHEME

DEPOSIT-RETURN PROGRAMMES



Under a deposit-return scheme, consumers pay a deposit when they buy a drinks bottle or can – typically 10p to 20p – which is refunded if they return the empty container to be recycled, usually through a network of reverse vending machines. Germany has one of the most wide-ranging and highly regulated schemes, which is one of the reasons behind its success, says Michelle Carvell from Lorax Compliance. “This has been in place for non-reusable containers since 2003 and is now well ingrained in daily German life,” she says, adding that the scheme has been extended to include containers of carbonated fruit nectars and vegetable juices.

to landfill if this is more convenient,” says Michelle Carvell, chief operating officer of Lorax Compliance, an environmental reporting provider. She points to a study in which nearly 40% of people admitted they would probably put their empty bottles or cans into a general rubbish bin if a recycling bin wasn’t handy when out and about.

She adds that, as the schemes are so costly, public education campaigns are required to ensure return rates are high enough and bring about meaningful behavioural change. “The German system is estimated to have cost about £600m to set up, with additional annual running costs of £700m,” she says.

Like Restorick, Carvell feels there is now much greater public awareness of the negative impacts of littering and pollution, and that this should ultimately lead to greater acceptance of green policies based on ‘polluter pays’ principles. “When consumers see the negative impact of their waste and the change they can make through a small levy, they will call on governments to make the change,” she says. ■