

Ask NUS economists

How would a person's carbon scorecard work?

One way to assess the impact of your carbon choices is by tracking digital spending

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For The Straits Times

Q *There are carbon scorecards for countries and companies to assess their carbon footprint. How about one for individual consumers in digitally savvy Singapore to help in the climate fight?*

A Governments around the world are under immense pressure to reduce carbon emissions, and fast. An essential tool is the carbon scorecard to help inform and monitor the effectiveness of efforts in reducing emissions.

Carbon scorecards have been in place for countries through national emissions inventories, which report on pollutants released into the atmosphere.

As for companies, regulators such as the United States Securities and Exchange Commission are proposing they disclose direct and

indirect emissions in their supply chains. A small number of companies now also pay a tax on their carbon emissions, and/or “offset” their emissions by paying someone else to cut or remove a given quantity of greenhouse gases from the atmosphere.

As a rich, well-governed, ambitious nation, Singapore can lead the way by adding household carbon scorecards to the policy mix.

The idea was raised at a Budget round-table discussion (“Introduce individual carbon scorecard with incentives to keep emissions low: Panellist”, *The Straits Times*, March 17).

How could household carbon scorecards work?

One possible way is through taxation and the growing use of digital payments. Digital payments enable household consumption to be traced. Itemised payments could include quantities, and be linked to the NRIC of the household head, or individual, and this information is included in their tax returns.

So, for example, every time a

consumer fills up the tank, pays for utilities and shops for groceries, the retailer reports NRIC-linked litres of petrol, kWh of electricity and kg of beef to the relevant authorities.

This is calculated into a household's carbon use – so 100 kWh of electricity, 40 litres of petrol, and 1 kg of beef would contribute 50, 100, and 30kg of carbon dioxide equivalents (CO₂e), respectively.

At least once a year, a household would receive a carbon scorecard. To reward those who make low carbon choices, this information could be linked to monetary incentives.

One option would be to charge a zero price on the first 5 tonnes of (annual) CO₂e, \$10 on the next tonne of CO₂e to 6 tonnes, \$20 on the next tonne to 7 tonnes, and so on.

Carbon brackets could vary according to household composition, such as the number and age of dependents.

The mapping of itemised consumption quantities into carbon scores can be adjusted to reflect Singapore Green Plan 2030 goals, including betting on novel proteins that hold promise for a low-carbon and food-secure future, and innovation over time,

such as the greening of Singapore's electricity grid.

Like redistributive income taxes, a progressive carbon pricing schedule can be crafted to help address very unequal carbon footprints, and may flexibly contain provisions similar to specific family-friendly income tax policies such as child relief.

Most households would fall in the first, zero-price carbon bracket.

An alternative to the stick approach is to offer carrots to encourage changes in consumer behaviour. For example, low carbon scorecards would earn income tax deductions much like life insurance premiums do, access to green financing such as mortgages, and other brownie points.

As well as financial incentives, this itemising of household consumption into carbon scores would help drive home the climate impact of a person's consumption choices, both informing them and holding them to account.

They might better realise the impact of their decisions – high-carbon choices such as using a car, setting the air-conditioner at 22-23 deg C, and eating beef, versus greener alternatives such as taking the public bus, raising the

thermostat temperature on air-conditioners to 25-26 deg C (with a fan providing additional relief), and eating chicken or plant-based protein.

This is not about banning certain products, but about nudging consumers in the direction of greener lifestyles. Through peer effects and social influencing, scorecards can also take advantage of consumers who go green to be seen.

The added relevance of carbon to households may also encourage retailers to help consumers become more carbon literate. One can imagine signs reminding shoppers that 100g of, respectively, lamb, fish and pinto beans – with 16, 23 and 21g of protein – contribute 2,600, 400 and under 100g of CO₂e emitted from farm to table.

Retailers could further innovate by placing plant-based meats alongside animal meat on the shelf.

Over time, consumers would learn that the main environmental impact of food comes from the type of protein rather than its packaging and that selected veggies can pack a protein punch (with cholesterol as low as zero).

But why extend carbon scorecards to individuals?

Some may argue that if companies pay for carbon emissions, then why should individuals, as this might result in paying tax on already taxed items. One response is that such “double taxation” is acceptable in other domains such as income tax, and policymakers can vary the magnitude of taxes that fall on different agents in society. But the bigger picture is that while implementing scorecards for corporations may be easier, only household scorecards can make carbon more salient at the point of consumption and make voters more accepting of policies to mitigate the climate crisis.

Besides, at the individual level, it is good to know more about our carbon footprint and the price of our individual score on carbon emissions. And that we can do our bit.

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