FOOTPRINT AS UTILITY PARAMETER

A TECHNICAL ASSESSMENT OF THE POSSIBILITY OF USING FOOTPRINT AS THE UTILITY PARAMETER FOR REGULATING PASSENGER CAR CO_2 EMISSIONS IN THE EU

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July 2, 2008

SUMMARY FOR POLICY-MAKERS

The European Commission has to regulate the amount of carbon dioxide emissions from new cars if it is to have any chance of meeting its climate commitments, and it has set a target of 130 grams per kilometre from the average new vehicle. But the EU wants the diversity of the EU fleet to be respected, which means having different targets for some vehicles than for others. It could divide vehicles into categories and propose a target for each, but this would be very arbitrary. It therefore needs a uniform basis for ensuring that all vehicles make their fair share towards cutting CO_2 emissions – this basis is known as a 'utility parameter' that will in some way reflect the 'size' or usefulness of the car.

There are three obvious utility parameters: the weight (or mass) of a vehicle, its overall area, and its 'footprint' (the area between the wheels). When the Commission published its proposals on a binding CO_2 regulation for new cars in December 2007, there was very little data available on footprint, so only weight and overall area (or pan area) were seriously considered. But a number of observers argued that both weight and pan area had shortcomings, and footprint would be a more reliable utility parameter. Now the data on footprint are available, and this paper presents them, comparing them with weight and pan area as potential utility parameters for the Commission's legislation.

The researchers looked at the pros and cons of using footprint as a utility parameter – in particular its ability to avoid perverse incentives such as 'gaming' (the practice of car makers tinkering with cars to make them fit into category with a higher CO_2 allowance). They also investigated how understandable footprint is, whether there were any cost implications, and also ensured that using footprint as a parameter would meet EU legal requirements on not discriminating between one manufacturer group and another (especially as some car makers specialise in larger or smaller models). And it was also important to establish how easy it would be to compile a footprint database of all new models available in the EU.

The authors, who come from three major research institutes (IEEP, TNO and CE Delft), were the same team that supported the Commission in developing its proposals. In summary, their conclusions were:

- Getting the data on footprint is not an obstacle, in fact it was obtained for the research for this report. In addition, the CO2 reduction values required per manufacturer to meet a 130g/km target have been successfully generated on this basis.

- Technical analysis suggests that footprint performs at least as well as weight or pan area as a possible utility parameter, and in several important respects better.

- Using footprint avoids the problem that comes with using weight as the parameter, namely that the incentive for reducing vehicle weight – and thereby CO2 emissions – is reduced or even eliminated.

- Footprint does not eliminate all perverse incentives, but as it is harder to increase the footprint (compared with increasing weight or pan area), it reduces the chances of cheap 'gaming' options.

- The overall cost of using footprint as a parameter in CO2 reduction legislation is no greater than with weight or pan area, and could be less as the system would reward weight reduction. Also the impacts on individual companies would be about the same.

In the light of these conclusions the authors argue that footprint should be substituted for the weight parameter in the Commission proposal.