

Finland

Energy taxes (incl. traffic fuels)

A retrospective assessment made by the Economic Council in 2000 showed that Finland's CO₂ emissions would have been 4 million tonnes i.e. 7% higher in 1998 had the energy taxes been kept at the 1990 level. It was estimated that 50 per cent of this reduction (2 million tonnes) resulted from changes in the end use of the energy i.e. from the reduced consumption of traffic fuels and restructuring by industry and the associated lowering in demand. The effect of both factors was put at about 1 million tonnes. The other 50 per cent of the reduction was estimated to have come from converting to fuels with less carbon dioxide in the production of electricity and heating.

The CO₂ tax on fossil fuels has also had a positive impact on other air pollutants, as a "side benefit".

It has been estimated by means of a general equilibrium model that a doubling of the surtax on fuel tax would reduce carbon dioxide emissions by 4% by 2010 compared with the baseline scenario. If the surtax on the electricity tax were to be raised to a level corresponding to the fuel tax, emissions would fall by slightly more than 5%. The main negative effects at the industrial sector level would be seen in the form of a reduction in exports and production by energy-intensive sectors. The negative impacts could be alleviated to some extent by refunding the increased tax proceeds through reduced income taxes or social security payments.

It has also been estimated the price elasticities of certain goods on the basis of statistics on consumer behaviour by households 1966-1985. The price elasticity for energy reached in the study was -0.36 . In an earlier study the price elasticity for the energy consumed in dwelling was -0.17 .

Taxation of vehicles

According to a study carried out by the EU Commission, the price elasticity in the demand for private vehicles is -0.1 . In the long term, too, the price elasticity in relation to the number of kilometres driven is quite limited, between -0.1 and -0.4 . All in all, the price elasticities in owning and using a car have been found to be quite small.

Changing the car tax from the present system, in which the tax depends on the car's value, or changing the annual vehicle tax into one where they are dependent on the car's emissions, would probably improve the environmental effectiveness of the tax instrument. Tax differentiation, to speed up the move towards cleaner vehicles and fuels, has been quite successful in Finland. Examples range from catalytic converters and unleaded petrol to more recent differentiation in different grades of diesel oil (sulphur free) and petrol (reformulated, sulphur free).