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Evolution of Oil Taxes: an International Perspective

One of the most applied climate policy instruments are taxes that are either levied directly on the consumption of products leading to greenhouse gas (GHG) emissions, such as fossil fuels, or on the use of goods like cars or roads that complement the former. Although many countries agree that these taxes are useful, the extent to which they are employed varies enormously. To enable a comparison of the different specific taxes on oil products in different countries, it is therefore necessary to harmonise the data. A simple comparison of the nominal tax rates of two countries, would fail to account for price effects, the effects of differing purchasing power, and other effects impacting the data.

We have therefore used the nominal specific taxes provided in the IEA database "Energy Prices and Taxes" and have transformed the data in two ways. Firstly, it is important to note that the value added tax (VAT) in the countries considered is levied not only on the net price, but also on the excise tax. Thus, we add the VAT on the excise tax to the countries' specific taxes since it is a part of the tax burden and varies with the excise tax. In the second step we have used the GDP deflators to eliminate price effects from the evolution of the oil tax. To make the levels of the specific taxes comparable between different countries, we have converted them into dollars using purchasing power parity (PPP)-adjusted exchange rates.

The three figures below show the evolution of the calculated specific taxes in selected countries and groups of countries. DICE contains the figures and the data for all OECD countries.[1] Figure 1 features the specific taxes on premium unleaded gasoline. Figure 2 depicts the evolution of the diesel taxes, while Figure 3 illustrates the development of a consumption weighted average of the specific taxes over all oil products.[2] As for the average over different products, we calculated averages for different regions (G7, EU and OECD) in order to provide reference values.

Considering premium unleaded, diesel and the weighted average specific taxes over all oil products, we observe average yearly increases of between 0.8 percent (Italy, premium unleaded) and 10.7 percent (United Kingdom, all oil products). Alongside Italy, the United States is the only country with a negative overall development of its taxes on premium unleaded gasoline. As far as diesel is concerned, all of the countries considered exhibit positive overall growth in specific taxes. Interestingly, in the case of diesel, Italy alone has the highest quarterly increase on average at 8.7 percent. The average yearly increase in the specific taxes for all OECD countries amounts to 1.0 percent and 2.7 percent for diesel and premium unleaded gasoline respectively.

Not only growth rates, but the levels of specific taxes on oil products also vary to a large extent between some of the countries analysed. The specific tax on premium unleaded gasoline in the United Kingdom, for example, is over eight times higher than in the United States, while the specific tax on diesel is over seven times higher.

Another key insight from the international perspective on oil taxes is reflected in Figure 1: the unavailability of data concerning US gasoline taxes before 1995 illustrates the US's importance in terms of worldwide gasoline consumption on the one hand; and demonstrates the low level of its specific taxes on the other. The inclusion of the US reduces the average tax rate of all OECD countries by nearly 48 percent from 770 to 400 USD per ton of oil equivalent.

In conclusion, we can note that specific taxes on oil products have increased in nearly all observed countries in recent decades. However, both the growth rates and the levels of taxes vary considerably between some of the countries.

Julian Dieler

Reference

IEA (2013), "End-use Prices: Energy Prices in National Currency per Unit", *IEA Energy Prices and Taxes Statistics* (database).

[1] Except Iceland.
[2] The average is derived based on the following products: auto diesel, diesel, high sulfur fuel oil, kero-sene, low sulfur fuel oil, LPG and premium unleaded gasoline.

Figure 1

Figure 2

Figure 3