Commodity tax competition among European countries:

The case of diesel, petrol and cigarette taxes

László Paizs

Institute of Economics of the Hungarian Academy of Sciences

Budaörsi út 45., Budapest, Hungary

laszlo.paizs@gmail.com

The aim of this paper is to assess the importance of strategic interactions between European Union (EU) countries in the setting of three commodity taxes. The main questions to be answered are as follows:

- Do EU member countries compete over tax revenues in the setting of their diesel, petrol and cigarette taxes?
- Do country sizes affect strategic interactions between countries?
- Has the EU's system of minimum excise duty rates been effective in curbing tax competition?

Prior research in commodity tax consumption has concentrated on the United States. The reason for this paper's focus on the European Union is that the EU countries have witnessed a substantial increase in the amount of cross-border shopping since the 1990s, subsequent to the creation of the Single Market in 1993.

To answer the above questions the author estimates tax reaction functions implied by the models of asymmetric tax competition. The reaction functions describe how the tax rate of a country relates to the tax rates of other countries and its domestic characteristics like size, fiscal conditions etc.. The estimation is carried out on a panel of 16 European countries (the old EU-15 without Greece but including Norway and Switzerland). The data on diesel and petrol taxes span from 1978 to 2005, while the data on cigarette prices span from 1990 to 2007.

The most important results are the following:

- There is strong evidence that European countries engage in tax competition for diesel and petrol consumers. On average, a 10 percent increase in the neighboring countries' fuel tax rates induces a 2 to 3 percent increase in the home country's tax rate.
- There is robust evidence that large countries respond more strongly to changes in other countries' tax rates on diesel and petrol than small countries do. The response of an average large country to a change in fuel tax rates in neighboring countries is found to be 2-3 times higher than that of an average small country.
- There is also evidence that strategic interactions between European countries in the setting of diesel and petrol taxes have intensified since the 1990s.
- There is no robust evidence for tax competition in cigarette taxes.

An important implication of the above results is that they confirm that it is asymmetric tax competition that drives small European countries to set lower tax rates on diesel and petrol than their larger neighbors. This finding has important policy relevance. As suggested by the theoretical literature, under asymmetric tax competition the minimum tax rate will not result in harmonized tax rates across countries. Thus, the empirical evidence of asymmetric tax competition between European countries, provided in this study, explain why the minimum tax policy adopted by the EU in 1993 has failed to narrow the differences in diesel and petrol excise levels within the European Union.

Keywords: tax competition, asymmetric regions, commodity taxes, minimum tax, European Union