

Green tax reforms and the mitigation of the rebound effect: the evaluation of a likely fourth dividend

Topic: Evaluating environmental policies

Author: Ana-Isabel Guerra

This analysis presents empirical evidence about the possible economy-wide impacts of Green Tax Reforms as well as of “hybrid” policies that combine them with energy efficiency policies. In doing so we have used a static applied General Equilibrium Model for the Spanish economy. Our results indicate that there are some complementarities between Green Tax Reforms and energy efficiency policies. In fact, according to our results, the simultaneous implementation of these policies might reinforce the likelihood of the first dividend (a reduction in CO2 emissions levels), the second dividend (an increase of overall efficiency levels in the economy) and the third dividend, i.e. the employment dividend, while mitigating the economy-wide rebound effects from energy efficiency policies—the fourth dividend. We evaluate two types of Green Tax Reforms. The first one compensates the increases in environmental taxes with declines in the social security contributions paid by employers. The second one considers that these increases go with a reduction in the indirect taxes on domestic production. These two likely Green Tax Reforms have not been chosen ad-hoc but rather using a novel approach that allows computing the tax interaction effect. This effect is considered as a key issue on determining the derived economy-wide impacts of this type of policies. Our findings indicate that the social security contributions paid by employers lead to the largest tax interaction effects and consequently they are appropriate candidates for Green Tax Reforms in the Spanish economy.