

## **Environmental progressive tax reform through a dynamic general equilibrium analysis**

Topic: Evaluating environmental policies

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The challenge of climate change needs to be tackled with environmental policy instruments carefully designed in order to achieve environmental benefits and to avoid negative economic effects. An environmental tax reform that is designed to reduce greenhouse gas (GHG) emissions can generate additional benefits when tax revenue is recycled in the economy in order to finance the reduction of pre-existing taxes. These further benefits, known as blue second (or third) dividend, integrate the first green dividend that represents the environmental target. In particular, a green tax on commodities output, that is applied with a progressive structure according polluting capacity of each production process, can generate a double/triple dividend when tax revenue is recycled by means of a reduction of income tax or value added taxes. Such tax reform should be tested through a dynamic general equilibrium analysis in order to quantify its effects over time period both on emission level, disposable income and unemployment rate. International environmental agreements in fact, set clear temporal objectives for each country about the reduction of GHG. Thus environmental policies that aim to restore the correct level of emission without neglecting GDP growth should be tested over time. In this respect, the paper develops a dynamic general equilibrium model based on the SAM framework that allows to quantify in the long time both the economic and the environmental effects that the environmental tax reform can generate.