

## *Research Fellowship Programme – Growth perspectives for the EU*

### **Essay on Fiscal implications of the transition to a low carbon economy**

#### **Background**

For growth to be sustainable public policies cannot ignore the challenge of climate change, or the challenge resulting from a continually eroding natural resource base. In this context, market-based instruments play a crucial role in promoting the transition to a low carbon economy and the role of the ETS and of other climate policy instruments has been to provide incentives to decarbonise our economy.

Climate change induces mitigation and adaptation costs that have to be borne not only by the private but also by the public sector. The knowledge about these costs is still poor, which make these issues under-scrutinised by policy makers. Also, the magnitude of the climate change impacts varies across Member States, which entails different costs and adaptation needs. Some studies provide estimates of these impacts. In particular, a study on the fiscal implications of climate change adaptation prepared by CEPS for DG ECFIN<sup>1</sup>, in 2009, reviewed the existing literature on the quantification of adaptation costs and estimated how these costs were allocated between public and private budgets. The study also proposed a theoretical framework to analyse the autonomous response to climate change impacts and identify the potential market failures that may contribute to a suboptimal adaptation by individual agents. More recently, a paper prepared by Olmos and al<sup>2</sup> tries to quantify the aggregated net budget impact of direct and indirect effects of new climate policies (both mitigation and adaptation), focusing on carbon pricing and support to new technologies. Climate Cost (The Full Costs of Climate Change)<sup>3</sup> is another comprehensive project dealing with the economics of climate change.

As the knowledge about climate change causes and consequences improves, the EU and the EU Member States are increasingly taking climate change impacts into consideration in their policies. Many Member States have adopted and implemented adaptation strategies.

#### **Aim of the essay and key questions to be tackled**

This essay should provide a perspective on the fiscal implications of current and future climate change adaptation efforts and build an analytical framework on the major direct and indirect impacts of the adaptation climate policy on public finances. In particular, which part of climate efforts should be left to private agents, and what role the government should play, taking the impact on public finances into account? Is there a need to consider a cross-country burden sharing at EU level?

The essay should also discuss the following issues:

- On what factors do the public costs of climate adaptation depend? In which countries is this expenditure particularly high?

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<sup>1</sup> [http://ec.europa.eu/economy\\_finance/publications/external\\_studies/ex\\_study1\\_en.htm](http://ec.europa.eu/economy_finance/publications/external_studies/ex_study1_en.htm)

<sup>2</sup> <http://www.eui.eu/Projects/THINK/Documents/Thinktopic/THINKTOPIC4.pdf>

<sup>3</sup> <http://www.climatecost.cc/>

- What does the literature say about the impact of climate adaptation policies on public finances? What types of expenditure is needed (e.g. investment and social spending,)?
- Are there any data available about current national and EU funding of climate adaptation policies? If these data are available, how large is the available funding in comparison to the needs given in the strategies and in the literature? Which Member States have already adopted a national adaptation strategy and do these strategies, or any other relevant national strategies, give an indication of the amount/share of public funds (national and EU) planned to implement climate adaptation policies?
- How can climate adaptation policies be best integrated into national budget preparation?
- Should the burden of climate adaptation be shared between Member States or should it remain at national level?