Carbon Tax, Pensions and Public Deficits: The hidden cost of the compartmentalization of expertise

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1. Overview

This paper aims at raising attention to two intertwined issues. The first one concerns the consequences of the prevailing intellectual compartmentalization between questions related to energy and climate on the one hand, and to the viability of social security systems on the other. The second issue is about the fact that existing evaluations of pension systems ignore the general equilibrium effects of the various funding options on competitiveness, employment and wages.

2. Method

We start by describing the partial equilibrium framework of pension systems analyses. We illustrate this framework and its use with the 2010 assessment report of the *Conseil d'Orientation des Retraites* (French Pensions Advisory Council). We underline the limitation of such an approach to analyse the impacts of reform schemes when the funding requirement for pensions is not the only macroeconomic constraint. With a basic accounting reasoning, we introduce the fact that following this approach may be equivalent to assuming further external indebtedness at the country scale. This may result from the interdependences of the previous financial constraint with three other constraints: 1) a decrease in savings with ageing, 3) a competitive pressure and a demand constraint on product markets, 3) another financial constraint due to the fossil fuel dependence of energy importing countries.

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We then take the methodological venture of building a general equilibrium projection of France that is consistent with a partial equilibrium scenario of the pension system. We use a version of the IMACLIM computable general equilibrium model developed at CIRED to get a set of consistent national account tables for the year 2020. This full set of accounts incorporate quantitative assumptions coming from various forecasting exercises about the three previous macroeconomic constraints (omitted in the traditional approach of pension forecasting). We describe how we combine those pieces of information to get a consistent macroeconomic picture. This picture displays with more details the result introduced before with the basic accounting reasoning. In a context of higher energy prices and lower savings, the risk of widening public and national deficits is significant.

3. Results

We use the IMACLIM model to simulate the impacts of different reform schemes on different macroeconomic and environmental indicators. We consider the following reform schemes: 1) a postponement of the retired age, 2) a reduction of public expenditures, 3) an increase in social security contributions rates (on labour income), 4) an implementation of a carbon tax, 5) an increase in income tax, and 5) a policy package that combines a carbon tax of 200€/tCO_2 with a lower rate of social security contributions and a higher income tax. We assess the impacts of those schemes under a same constraint: the target of funding of the French public pension system up to 2020.

4. Conclusion

Through the comparative analysis of these schemes of public finance reform, we emphasize the limitations of policies that either 1) use only one of the present instruments of the pension system (social contributions, retirement age), or 2) look for new resources by only considering an increase of income tax or VAT. In addition, we present a way to remove these limitations by introducing a carbon tax as a component of a policy package designed to absorb the deficits of the social accounts. We show that the current compartmentalization of expertise is dangerous, both for the funding of pension systems as well as for removing the obstacles to an ambitious climate policy.