

## Carbon Tax Reform and Social Progress in France: a Macro-Micro Analysis

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Most of climate policies have been designed using a "comprehensive approach" that evaluates separately the impacts on two dimensions of welfare: the "productive efficiency" on the one hand (GDP, employment, *etc.*), the "distributive justice" on the other (inequalities, job inclusion, *etc.*). In practice, however, we observe a gap between theoretical ideals and practical reality; indeed, it is hard to find a political consensus balancing those two competing objectives. And what is increasingly called for in public debates is labeled as a "just transition" towards a sustainable development path.

This paper aims at sorting out some fundamental sources of disagreements (value judgments, beliefs in the functioning of the world) and studying the nature of the tensions between the major dimensions of acceptability (environmental efficiency, productive efficiency and distributive justice). This question is illustrated with the case of a carbon tax reform in France.

Simulations are drawn from a "macro-micro" computable general equilibrium model that has been specially built to link those dimensions. Its key specificity is to rely on a coherent system of national accounting that has been extended to the interfaces between the economy, the environment and the social dimension. First the flows of energy are described precisely thanks to an effort to harmonize energy data with the national accounts. Second, the distribution of national aggregates between categories of households is detailed using microeconomic data coming from household's surveys. The flexibility of the model allows us to analyze the sensitivity of the justice judgment to the various norms associated to the concept of "vulnerability" (localization, family size and composition, level of income *etc.*).

The results first highlight the gap between the cost of a carbon tax reform as it is spontaneously perceived by the taxpayers and the reality of its ultimate consequences: The real impact on households' poverty and inequalities is not mechanically determined by the initial burden of energy on consumption budgets and by the capacity of households to alleviate it. It also depends upon the use made of the tax proceeds and its general macroeconomic impacts. The comparison of fixe tax-recycling schemes stresses the existence of trade-offs between maximizing total consumption, reducing unemployment, maximizing the consumption of the low-income classes and reducing income inequality. Second, this trade-off is sensitive to the value judgment captured by the proxy measure of vulnerability.