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TITLE: ECONOMIC AND ENVIRONMENTAL EFFICIENT POLICIES IN AN APPLIED GENERAL EQUILIBRIUM FRAMEWORK.

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ABSTRACT:

The measures taken in order to fight against the climate change can create conflict when trying to achieve certain economic goals. That is why the design of economic and environmental policies can be understood as a multi-criteria decision problem. In this article we tackle the design of public policies combining multi-criteria techniques and the modeling of computable general equilibrium. More precisely, we define the "efficient policy" concept and we apply such definitions to the Spanish economy with the 2000 year data. The methodology proposed enables the construction of a set of efficient policies in terms of economic growth and polluting emissions, at the same time it enlarges the set of political goals. The standard approach in economics to model the optimal design of economic policy is to assume that a social planner aims at maximizing some social welfare function, typically the utility function of a representative consumer. This conventional approach is also applied to the modelling of environmental policy, which is envisioned as the correction of externalities and other market failures in order to achieve the maximum economic welfare. A more pragmatic look at the design of economic policy and environmental policy in practice can lead to the conclusion that policy makers do not seek to maximize a single welfare function, but they are typically concerned about a bundle of economic and environmental variables or indicators and they try to design their policies to improve the performance of the economy as measured by these indicators. The so-called Multicriteria Decision Making (MCDM henceforth) literature has been developed to deal with situations in which it is not reasonable or operational to assume the existence of a single criterion that rightly defines the preferences of the decision-maker (DM). This type of approach has been applied very extensively to the management of the environment and natural resources (see e.g., Romero and Rehman, 1987, Mendoza and Martins, 2006, Mavrotas and others, 2006, Brody and others, 2006, Liu, 2007, Noble and Christmas, 2008). Policy makers do not usually pursue the maximization of any policy objective, but they try to achieve as much as possible some reasonable aspiration levels. The methodology is applied to the Spanish economy.