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“An Unorthodox Way of Reducing the Burden of Public Debt: the Potential Role of Renewable Energy”

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Overview In the general debate of the present first global recession is now rather commonly acknowledged the possibility of curing the twin crises, the economic and the climate ones, by investing / spending in the green economy (a recipe also known as a *global green new deal*). Along this stream of thought one can focus on the specific and binding problem of the high ratio between their public debt and GDP most European Union countries experience. Here comes the possibility of making a direct link with the energy market and more precisely with the production of energy through renewable sources such as the sun and wind . Considering that the public debt crisis is mainly concerned with the so called PIIGS countries (Portugal, Italy , Ireland, Greece, Spain) who happen to be also rich in sun and wind, a way out from their debt trap would be for them to give concessions for large scale investment programs in renewable energy. Revenues from the concessions would be used to reduce the debt. It would be therefore possible to convert debts into renewable energy production as suggested by a group of Dutch geoscientists and economists (Klaas van Egmond, Sylvester Eijffinger et al) and with reference to Greece and Portugal.

Method By taking this idea we started analyzing the Italian situation both with respect to public debt and the potential for the sun and wind energy production. Needless to say that both circumstances appeared very favorable to the development of a simulation model aiming at the assessment of practical implementation of reducing Italian debt through renewable energy concessions.

Results Taking into account the constraints related to land availability but also the opportunities of using buildings' roofs for the deployment of panels, we conclude that it is indeed possible to reduce a non negligible share of debt (up to 17%) with a relatively small portion of land (around 2%).

Conclusions Our results support the view of a win-win outcome stemming from this unorthodox way of reducing the burden of public debt (i.e. the conversion of public debt into renewable energy production). Namely, three sources of benefits can be identified: first, and obviously, public debt is reduced; second, a positive stimulus arises in terms of employment and production/GDP from the construction and maintenance of the projects; third, the increase in renewable energy contributes to a cleaner Europe while enhancing its energy security.

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