



Modelling competition between nuclear power and renewable energy technologies: some results and forecasts for Germany

Mariangela Guidolin*

University of Padua, Department of Statistical Sciences, Padua, Italy - guidolin@stat.unipd.it

Renato Guseo

University of Padua, Department of Statistical Sciences, Padua, Italy - renato.guseo@unipd.it

Modelling the diffusion processes of competing technologies is a theme of great interest in many socio-economic contexts. Univariate innovation diffusion models fail to account for competition and substitution dynamics, whose understanding may be crucial both for policy implications and forecasting. In this paper we propose the application of two diffusion models for a duopolistic competition, unrestricted and standard UCRC, to the annual time series of consumption of nuclear and renewables (wind and solar energy) in Germany. The data suggest a substitution effect between nuclear and renewables. Interestingly, the obtained results confirm this first conjecture and show that renewables exerted a significant and measurable effect in determining the observed decline of nuclear power consumption.

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