

#### DIPARTIMENTO DI ECONOMIA E MANAGEMENT

## **WEBINAR**

# "The Impact of Climate Change on GDP and Growth"

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ABSTRACT The study "The Impact of Climate Change on GDP and Growth" derives the Data Generating Process (DGP) of nonlinear long run and short run models. The nonlinearity of long run outcomes leads to interaction terms in the DGP between the marginal long run outcome and intertemporal variations. The nonlinearity of short run outcomes is a nonlinear function of intertemporal deviations which are simply added to the DGP. The long run effects in the panel are identified by the interaction terms and the short run effects by the intertemporal deviations. The model sheds light on how to interpret alternative DGP's in the literature. Examining international income, weather, and climate data, the results reveal temperature has a hill-shaped effect on income and that marginal income effects are twice as sensitive to short run versus long run temperature. Global warming of 3C by 2100 leads to a 3.8% reduction of 2100 GDP in poor hot countries and much smaller effects on GDP in the rest of the world.

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