

"The Impact of Economic and Climate Risks on the Social Cost of Carbon"

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Abstract

There is great uncertainty regarding the future of the economic system and regarding future climate conditions, uncertainty that is important for current and future policy making. We develop a multidimensional model that can be used to study the impact of uncertainty and risk in the economic and climate systems on the social cost of carbon. We find that economic and climate uncertainty each imply that this cost is a stochastic process even more uncertain than the economic and climate systems.

Uncertainty tends to imply a greater social cost in the current decade, but has much more significant implications for the future. In particular, there is a significant probability that by 2100 the social cost of carbon will be ten times the value implied by the same models under conditions of no uncertainty. These findings are robust with respect to alternative specifications of recursive utility and exogenous risks.