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Christopher Severen, Christopher Costello, Olivier Deschênes



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ABSTRACT

The hedonic pricing method is one of the main approaches used to estimate the economic value of attributes that affect the market price of an asset. This method is routinely used in environmental economics to derive the economic valuation of environmental attributes such as air pollution and water quality. For example, the “Ricardian approach” is based on a hedonic regression of land values on historical climate variables. Forecasts of future climate can then be employed to estimate the future costs of climate change. We show that this approach is only valid if current land markets ignore climate forecasts. While this assumption was defensible decades ago (when this literature first emerged), it is reasonable to hypothesize that information on climate change is so pervasive today that markets may already price in expectations of future climate change. Indeed, we show empirically that agricultural land markets in the United States now capitalize expectations about future climate change. We derive a straightforward empirical correction to the standard Ricardian approach (called the “Forward-Looking Ricardian Approach”) that can be implemented with readily available data. Accounting for market beliefs decreases the estimated magnitude of climate change damages by 50% to 62%.

Christopher Severen
Research Department
Ten Independence Mall
Federal Reserve Bank of Philadelphia
Philadelphia, PA 19106-1574
Chris.Severen@phil.frb.org

Olivier Deschênes
Department of Economics
2127 North Hall
University of California, Santa Barbara
Santa Barbara, CA 93106-9210
and NBER, IZA
olivier@econ.ucsb.edu

Christopher Costello
Bren School of Environmental Science &
Management
4410 Bren Hall
University of California, Santa Barbara
Santa Barbara, CA 93106-5131
and NBER
costello@bren.ucsb.edu

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