

Climate inequality

Matthew Alampay Davis*

Job market paper

October 2, 2024

[link to latest version](#)

Abstract

This paper documents new evidence that transitory temperature shocks exacerbate within-country income inequality substantially and persistently then considers its implications for the welfare economics of climate change. My empirical approach proceeds by applying time series methods to dataset standardizing comprehensive tax, survey, and national accounts data in order to estimate distributional impulse responses to identified temperature shocks. I then integrate these results with output from the latest generation of global circulation models to simulate the influence of anthropogenic radiative forcings on distributions of income both retrospectively and under a suite of projected emission scenarios. A stylized taxation model embedding a variety of social welfare functions implies a first-order role for compensatory fiscal policy in any optimal response to past and future climate change.

*wm.alampaydavis@gmail.com

I thank Suresh Naidu, Jack Willis, and Jeffrey Shrader for their advice and support throughout the preparation of this manuscript. This project benefited from the supervision of David F. Hendry and Elizabeth Baldwin in its original formulation as a graduate thesis and the thoughtful feedback of two anonymous examiners. Feedback from my colleagues at Columbia's development seminar, development colloquium, political economy colloquium, and student research breakfast helped improve this work. I acknowledge funding support from the Program for Economic Research.