

EGU2020-21004

<https://doi.org/10.5194/egusphere-egu2020-21004>

EGU General Assembly 2020

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



Modelling Historical Adaptation Rates to Inform Future Adaptation Pathways

Moritz Schwarz¹ and Felix Pretis^{1,2}

¹Climate Econometrics, University of Oxford, Oxford, United Kingdom of Great Britain and Northern Ireland

²Department of Economics, University of Victoria, Victoria, Canada

Quantifying the climate impacts onto economic outcomes is crucial to inform mitigation and adaptation policy decisions in the context of anthropogenic climate change. Existing macro-level economic impact projections are often derived using calibrated Integrated Assessment Models (IAMs) or empirically-estimated econometric models. Both approaches, however, rarely consider how such impacts would change under macro-level adaptation interventions. Here, we present approaches to econometrically test climate impact estimates for their historical stability to approximate empirical macro-adaptation rates. By modelling deterministic trends and structural breaks as well as socio-economic drivers of adaptation, our approach could provide the basis for a new set of macro-economic impact projections that control for adaptation measures. Ultimately, adaptation-explicit impact projections could be used to inform both mitigation and adaptation decisions and further allow benchmarking of non-empirical modelling approaches.