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RESEARCH NOTE: GEOGRAPHICAL DISTRIBUTION IN CLIMATE ECONOMICS PUBLICATIONS



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Research Note: Geographical Distribution in Climate Economics Publications

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Abstract. The majority of the most climate vulnerable populations in the world are located geographically in countries in the Global South. However, research and policy discussions on climate change often exclude knowledge produced by scholars from such regions. This research note investigates the extent to which this exclusion is mirrored in economics journal publications. A data set of articles studying climate economics in the top 20 economics journals was analysed, with a focus on the geographic locations of the authors' institutions. For the 50 most cited articles on climate economics, 91% of authors were found to be affiliated with USA and UK based institutions and 0% of authors with Global South based institutions. For the 50 most recently published articles less than 1% of authors were found to be affiliated with Global South based institutions. These findings confirm a significant geographical imbalance in climate economics publications.

About Economists for Future: [Economists for Future](#) is an international initiative which aims to mobilise economists and their influence to help avert the climate and ecological crisis. On the international level, we run targeted campaigns and research. In Germany, Econ4Future German are building up a community of young economists to push this agenda forward in departments and institutions.

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1. Introduction

Earlier this year, COP26 President Alok Sharma stated that ‘this would be the most inclusive COP ever’. However, it has been observed that over the event itself, many delegates from the Global South have been restricted from attending. But this is nothing new. For decades policy makers, scholars and activists from the Global South have been systematically excluded from the global conversations on environmental change and how to solve the problems it poses. This exclusion is mirrored in the economics profession. The distributional impacts of climate change and climate policy ought to be at the heart of climate economics. And yet too often, the voices dominating research and policy conversations don’t represent the nations and regions most vulnerable to worsening climate change.

Scholars in development economics highlight similar dynamics. Like climate economics, the field is explicitly concerned with studying economic phenomena and prescribing policy in low-income countries, and yet Global South institutions are underrepresented. As researchers Arvind Subramanian and Devesh Kapur note in a recent op-ed, less than 10% of randomized control studies in top economics journals-- industry standard in the development field-- were authored at developing-country institutions (Subramanian and Kapur, 2021). “Knowledge is power, so who creates it matters,” they write. “A small number of rich-country institutions have appropriated [development economics], with serious consequences.”

The limited representation of Global South economists in the development and climate disciplines reflects structural inequities at play across the research and publication process. As economist Jane Kabubo-Mariara, Executive Director of the Partnership for Economic Policy, explained in an interview with E4F (Economists for Future, 2020), scholars working in the Global South face funding and capacity constraints which make it more difficult to pursue climate and ecological research than for their colleagues in the Global North. She notes that funding for climate economics in the Global South is highly concentrated within a few central institutions and often restricted to mundane data collection work, limiting economists’ ability to incorporate ecological topics into a mainstream research agenda. High-impact journal publications on climate change and the editorial boards of top journals then tend to be dominated by Global North researchers—further isolating the research conversation (Angus et. al., 2021).

Together, these barriers position climate economics to advance the interests and perspectives of the Global North, despite its crucial implications for communities in the Global South.

At the outset of the 26th Conference of Parties, and in the midst of twin reckonings in development and climate subfields, the Economists for Future team paused to investigate the current level of geographic diversity in the climate economics literature. The E4F team used Web of Science and publicly available biographical information to gather institutional affiliations for the authors of the 50 most recent and most cited articles in climate economics. The resulting dataset allows us to quantify several measures of geographical imbalance and give a sense of the scope of research concentration in climate economics.

2. Why Does Geographical Imbalance Matter?

It is important that we outline the theoretical perspective from which we view the problem of geographic imbalance, and subsequently the lens through which we interpret the data.

We identify three reasons that geographic imbalances are a concern for research in climate economics. First, we recognize that knowledge is not produced in a vacuum, but rather is situated within particular socio-economic contexts (Haraway, 1991; Crasnow, 2014). Such a perspective is typically obscured by the narrowly positivist epistemology of economic research. However, it remains the case that the assumptions, choice of research questions, and research designs that an economist chooses are strongly influenced by their own positions within structures of race, gender, class, nationality etc. The production of knowledge in such structures can bias research towards the interests of the powerful. Chelwa (2021) for instance shows that economics has an ‘Africa problem’, uncovering the systematic exclusion of native scholars from economic research produced about the continent. Chelwa argues that this ‘likely account[s] for the dismal state of the discipline’s knowledge about the continent’ (pp.78). This further contributes to hegemonic methodological approaches, biases towards certain questions over others, and often can produce simply incorrect information about how economies on the African continent actually work. Similarly, if climate-vulnerable populations are systematically excluded from economics research on climate change, we have reason to worry that the resulting policy recommendations may not prove effective or relevant.

Second, and closely related, is that the location of knowledge production within institutions in historically powerful countries contributes to research which produces epistemic injustice, a form of injustice in which ‘someone is wronged specifically in her capacity as a knower.’ (Fricker, 2007; McKinnon, 2016) An individual facing epistemic injustice might be perceived as less credible-- lacking the authority to hold and share knowledge-- even when discussing her field of expertise or lived experience. Bodies of academic work produced mostly within historically powerful countries keep alive the colonial practice of denying native knowledge producers the ability to disseminate knowledge. Similar patterns have been observed in the climate science literature (CarbonBrief, 2021; Pasgaard et. al., 2015). Such injustices are intensified in the context of the planetary emergency, to which societies in the Global South are far more vulnerable. As Grieve Chelwa points out in an interview with E4F,

‘It’s very difficult to come up with solutions or to understand problems if the folks who you are trying to devise solutions for are not present in the debates. [...] But also, if those solutions go pear-shaped, [...] the group that is excluded will have to bear the brunt of those policy mistakes.’(pp. 10-11)

Finally, geographic imbalances in knowledge production limit pluralism in the economics of the planetary crisis. Dominant universities, journals and policy-making institutions have been implicated by the research of Roos and Hoffart (2020) in restricting the diversity of theoretical and methodological approaches commonly used in climate economics research. It is of no small consequence if such institutions are located in the Global North. Reinert, Ghosh and Kattel (2016) note that the present dominance of US-based institutions and anglophone literatures silos the discipline from the plural approaches to studying economics presented by other traditions around the world. Indeed, the limits of the state-of-the-art approaches to studying climate

economics have been well noted (See e.g. Keen, 2021; Asefi-Najafabady et. al., 2021, Palmer, 2018). If economics is to succeed in providing the tools to arrest the planetary emergency, it must be open to diversity and plurality in its thinking.

3. Methodology

We analyzed author affiliations from the fifty most frequently cited and fifty most recent articles published on climate economics in top-ranked, general interest economics journals. We used a Web of Science search on March 15, 2021 to pull articles with keywords “climate change”, “global warming”, “greenhouse gasses/GHG”, or “carbon” from the top 20 journals of economics identified by the same platform. Using online, publicly available biographical information, we identified the home institutions of each author to break down the geographic distribution of key contributions to the climate economics literature.

We chose the top 20 journals in economics because top-ranked, general interest journals enjoy marked influence over research agendas in the field as well as over scholars’ career prospects (Heckman & Moktan, 2020). The full list of journals included, in order, is: *The Quarterly Journal of Economics*, *the Journal of Political Economy*, *Econometrica*, *the American Economic Review*, *the Journal of Economic Literature*, *the Journal of Finance*, *the Review of Economic Studies*, *the Journal of Financial Economics*, *the Journal of Economic Perspectives*, *the Journal of Monetary Economics*, *the Review of Economics and Statistics*, *the Economic Journal*, *the Journal of Econometrics*, *the Journal of Economic Theory*, *Brookings Papers on Economic Activity*, *the Journal of Labor Economics*, *the RAND Journal of Economics*, *the Journal of Public Economics*, *the Review of Financial Studies*, and *the Journal of Economic Growth*.

We find institutional information for 90 unique authors in the most cited literature and 122 unique authors in the most recent literature.

Because we focus on authors’ institutional affiliation, rather than their home country or personal identity, we recognize that some of the authors we list as affiliated with the Global North might actually be from a country in the Global South. Similarly, scholars working in the Global South might be from the Global North.

We stick with our method for two reasons. First, as Chelwa (2021) discusses, an analysis of authors’ national identities would require finer-grained biographical data than is currently available online. Second, we want to uncover geographic imbalances related to the barriers to entry in climate economics identified in the introduction. If Global South economists feel disproportionate pressure to pursue an academic career internationally, then that’s an inequity we want to capture in the data. And we ask: do Global North institutions and funders play a role in maintaining that imbalance? How could resources be shifted to expand opportunities for climate research in the Global South?

4. Results

4.1 Authors of the Fifty Most Frequently Cited Articles on Climate Economics

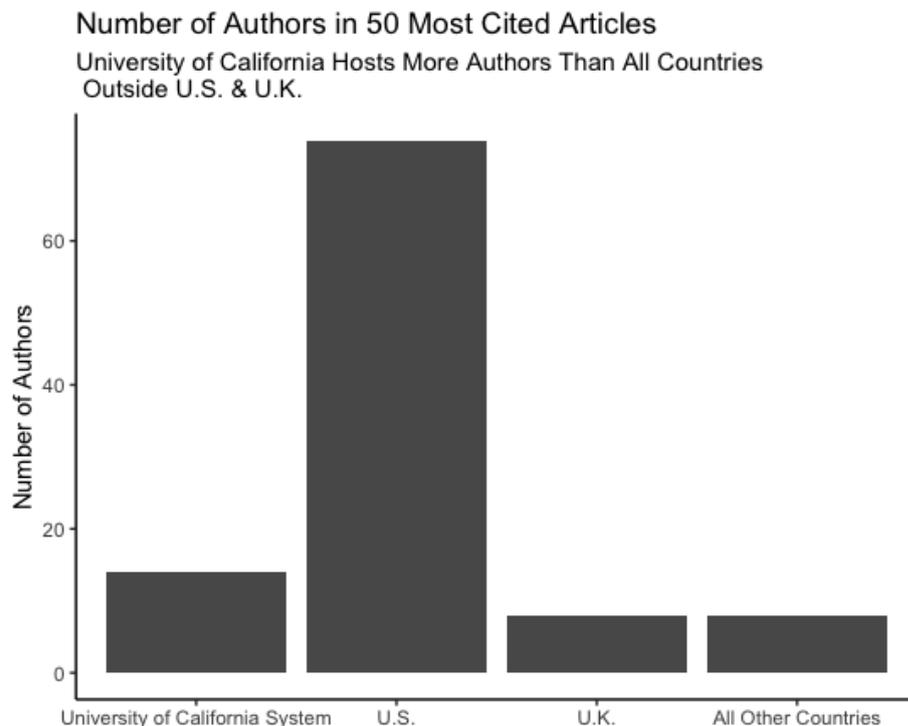
Our results reveal overwhelming concentration within the 50 most frequently cited articles, suggesting serious limitations in the ability of this body of research to center the perspectives of climate-vulnerable populations and address the goals of climate justice.

Of the authors of the 50 most cited articles in climate economics,

- 82% are affiliated with U.S.-based universities or institutions
- 91% are affiliated with U.S.- or U.K.-based institutions
- 0% are affiliated with institutions in the Global South

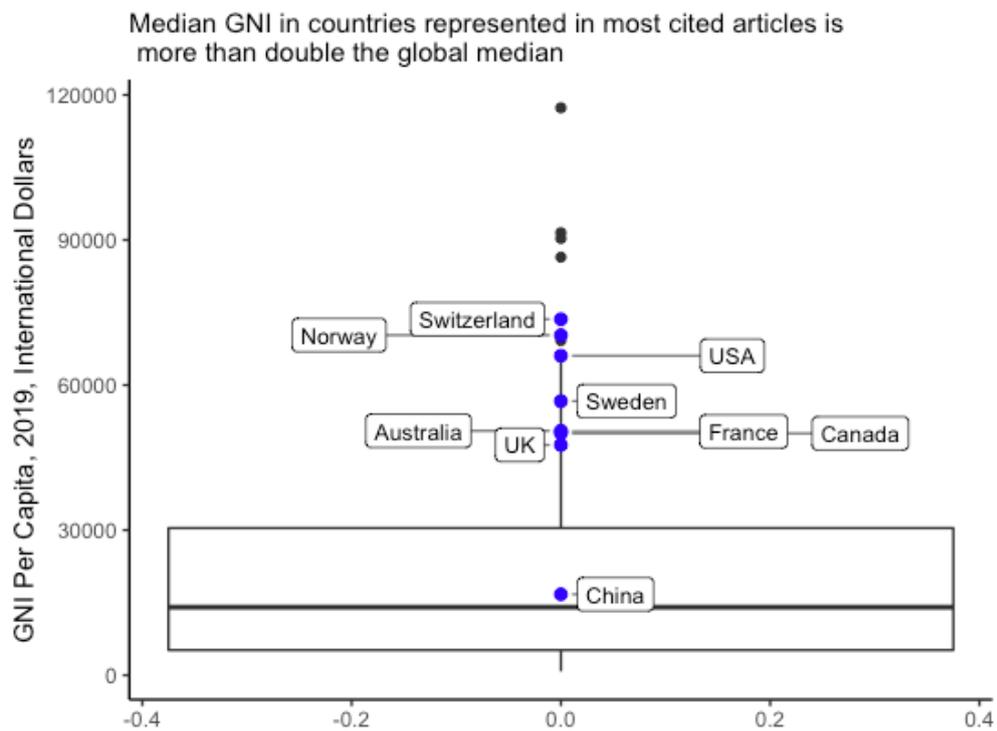
The countries represented in the 50 most cited articles are the United States, United Kingdom, Sweden, Australia, China, Canada, France, Norway, and Switzerland.

The ninety authors span 49 universities, but the majority (63 percent) are affiliated with just 14 departments of Economics. In fact, the University of California system alone hosts more contributors to the fifty most cited articles than do all countries outside the U.S. and U.K., accounting for over 15% of total authors.



Admittedly, five universities represented in the top 50 articles are included in the UC system--other private institutions are just as disproportionately represented. Still, the scale of this imbalance is stark. The University of California example demonstrates the potential for a limited number of researchers working in a historically powerful country to codify particular ways of thinking about the climate crisis. Multiply this instance, and epistemic injustice seeps into the research on climate economics.

Merging World Bank data containing gross national income (GNI) by country offers another clue that power dynamics in the production of the climate literature mirror those in the global economy. Per capita income in countries represented in the most cited articles in particular far exceeds that in countries not represented. The figure below shows the GNI per capita in 2019 in countries represented by authors of the fifty most cited articles, relative to the distribution as a whole. Every country represented falls above the global median; eight of nine countries have per capita GNI more than double the global median. Countries represented in the fifty most cited articles are highlighted in blue.



It's well established that low-income countries will be hardest hit by climate change and are disproportionately affected by climate-related disasters (e.g., UNFCCC, 2018; IPCC, 2018). An overreliance on literature from high-income countries becomes problematic in this context, because research “consensus” formed in a fundamentally different social situation is liable to overlook key elements of the local economic landscape. This situation makes it difficult for researchers from the Global South to publish “without genuflecting to wealthy institutions’ academic orthodoxies” (Subramanian & Kapur, 2021). What seems like conventional wisdom can then lead to misguided policy (Chelwa, 2021).

4.1 Authors of the Fifty Most Recently Published Articles on Climate Economics

The breakdown of the 50 most recent articles shows increased geographic diversity and meaningful representation of countries outside the U.S. and U.K. Yet, Global South institutions are still scarcely represented. Of these authors,

- 49% are affiliated with U.S.-based institutions
- 51% are affiliated with U.S. or U.K.-based institutions.
- Less than 1% are affiliated with institutions in the Global South.

The tables below show the full author counts by country for the fifty most recent and most cited articles. The only Global South country appearing in either analysis is Mexico, hosting one contributor to the most recent fifty articles on climate economics published in top, general interest journals. Most papers are co-authored by multiple scholars, so the total number of authors included in each analysis exceeds fifty.

50 Most Cited Articles		50 Most Recent Articles	
Country	N. Authors	Country	N. Authors
<i>United States</i>	74	<i>United States</i>	60
<i>United Kingdom</i>	8	<i>Germany</i>	15
<i>Sweden</i>	2	<i>Norway</i>	6
<i>Australia</i>	1	<i>Australia</i>	5
<i>China</i>	1	<i>Canada</i>	5
<i>Canada</i>	1	<i>China</i>	4
<i>France</i>	1	<i>France</i>	4
<i>Norway</i>	1	<i>Netherlands</i>	4
<i>Switzerland</i>	1	<i>South Korea</i>	3
		<i>Luxembourg</i>	2
		<i>Singapore</i>	2
		<i>Spain</i>	2
		<i>Sweden</i>	2
		<i>Switzerland</i>	2
		<i>United Kingdom</i>	2
		<i>Belgium</i>	1
		<i>Finland</i>	1
		<i>Japan</i>	1
		<i>Mexico</i>	1

It's encouraging that the more recent literature shows wider geographic representation than the canon. It suggests there is potential for greater diversity - more broadly situated knowledge - in the field moving forward. At the same time, we must ask ourselves: does this look like transformative change? By and large, historically marginalized and climate-vulnerable

countries appear left out of even the current research conversation in mainstream climate economics.

The finding also raises questions around whose research gets read and cited most often, ultimately winding its way into the hands of decision-makers. In a recent paper, Heckman and Moktan described the “The Tyranny of the Top Five” journals in the economics profession (2020). They write, “Publication in the T5 journals has become a professional standard. Its pursuit shapes research agendas... Papers published in non-T5 journals... are discounted accordingly.” Thus, even substantial improvements in geographic diversity in the top twenty journals might not be enough to alter the composition of the most frequently cited works. A decolonized body of climate literature will have research from the Global South at its center, driving decision-making, not just in the overall body of new publications.

4 Conclusion

The systematic exclusion of Global South scholars in climate economics occurs at multiple levels. It occurs when funding for climate projects is available primarily to rich-country scholars. It occurs when prestigious journals, research centers, and universities in the Global North garner power to dictate research agendas in the field. It occurs when policy decisions in the Global South are informed by research “consensus” among that relatively isolated pool of academics.

Our analysis evaluates the scope of this problem in one critical pathway to knowledge creation-- elite journal publications-- and documents substantial overrepresentation of rich-country institutions in top article contributors. We find that none of the contributors to the 50 most frequently cited articles on climate in top economics journals is affiliated with an institution in the Global South. Just one contributor to the 50 most recent articles is affiliated with an institution in the Global South (Universidad Nacional Autónoma de México).

With the 26th Conference of Parties underway, we are reminded just how much work is needed to embrace pluralist approaches, disrupt colonial power dynamics in top level decision-making, and ultimately craft stronger climate policy.

5 Bibliography

Angus, S. D., Atalay, K., Newton, J., & Ubilava, D. (2021). Geographic diversity in economic publishing. *Journal of Economic Behavior & Organization*, 190, 255-262.

Asefi-Najafabady, S., Villegas-Ortiz, L., & Morgan, J. (2021). The failure of Integrated Assessment Models as a response to ‘climate emergency’ and ecological breakdown: the Emperor has no clothes. *Globalizations*, 18(7), 1178-1188.

CarbonBrief (2021) Analysis: The lack of diversity in climate-science research
<https://www.carbonbrief.org/analysis-the-lack-of-diversity-in-climate-science-research>

Chelwa, G. (2021). Does economics have an ‘Africa problem’?. *Economy and Society*, 50(1), 78-99.

Crasnow, S. (2014). Feminist standpoint theory. *Philosophy of social science: A new introduction*, 1, 145-161.

Economists for Future (2020) *Beyond Economics as Usual: Treating a Crisis Like a Crisis*.
<https://econ4future.org/wp-content/uploads/2020/11/Beyond-Economics-As-Usual-3.pdf>

Fricker, M. (2007). *Epistemic injustice: Power and the ethics of knowing*. Oxford University Press.

Haraway, Donna. *Simians, cyborgs, and women: The reinvention of nature*. Routledge, 2013.

Heckman, J. J., & Moktan, S. (2020). Publishing and promotion in economics: the tyranny of the top five. *Journal of Economic Literature*, 58(2), 419-70.

Keen, S. (2021). The appallingly bad neoclassical economics of climate change. *Globalizations*, 18(7), 1149-1177.

McKinnon, R. (2016). Epistemic injustice. *Philosophy Compass*, 11(8), 437-446.

Palmer, G. (2018). A biophysical perspective of IPCC integrated energy modelling. *Energies*, 11(4), 839.

Pasgaard, M., Dalsgaard, B., Maruyama, P. K., Sandel, B., & Strange, N. (2015). Geographical imbalances and divides in the scientific production of climate change knowledge. *Global Environmental Change*, 35, 279-288

Reinert, E. S., Ghosh, J., & Kattel, R. (Eds.). (2016). *Handbook of alternative theories of economic development*. Edward Elgar Publishing.

Roos, M., & Hoffart, F. M. (2020). *Climate Economics: A Call for More Pluralism And Responsibility*. Springer Nature.

Roy, J., P. Tschakert, H. Waisman, S. Abdul Halim, P. Antwi-Agyei, P. Dasgupta, B. Hayward, M. Kanninen, D. Liverman, C. Okereke, P.F. Pinho, K. Riahi, & A.G. Suarez Rodriguez. (2018). Sustainable Development, Poverty Eradication and Reducing Inequalities. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)].

Subramanian, A. & Kapur, D. (2021). “The Absent Voices of Development Economics.” *Project Syndicate*. <https://www.project-syndicate.org/commentary/why-does-the-global-north-dominate-development-economics-by-arvind-subramanian-and-devesh-kapur-2021-03?barrier=accesspaylog>

United Nations Framework Convention on Climate Change. (2018). “Low-Income Countries Hit Hardest by Soaring Costs of Climate-Related Disasters.” <https://unfccc.int/news/low-income-countries-hit-hardest-by-soaring-costs-of-climate-related-disasters>