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## Tyler Hansen

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### Education

Ph.D. in Economics, University of Massachusetts Amherst, Jun. 2021 (expected)

M.A. in Economics, University of Massachusetts Amherst, Feb. 2018

B.A. in Mathematics and Religion, Luther College, May 2011

### Fields

- Environmental and Ecological Economics
- Political Economy
- Macroeconomics

### Dissertation

Title: "Three Essays on the Political Economy of Global Inaction on Climate Change"

Committee: Robert Pollin (Chair), James K. Boyce, Michael Ash, Kevin Young

Job Market Paper: "Stranded Assets and Reduced Profits: Analyzing the Economic Underpinnings of the Fossil Fuel Industry's Resistance to Climate Stabilization"

### Publications – Peer Reviewed

"Economics and Climate Justice Activism: Assessing the Financial Impact of the Fossil Fuel Divestment Movement" with Robert Pollin. *Review of Social Economy*, 2020.  
<https://doi.org/10.1080/00346764.2020.1785539>.

"The Co-Pollutant Cost of Carbon Emissions: An Analysis of the US Electric Power Generation Sector" with Irene C. Dedoussi, Florian Allroggen, Robert Flanagan, Brandon Taylor, Steven R. H. Barrett, and James K. Boyce. *Environmental Research Letters* 14 (9), 2019.  
<https://doi.org/10.1088/1748-9326/ab34e3>.

### Publications – Other

"A Green Growth Program for Colorado" with Robert Pollin, Jeannette Wicks-Lim, and Shouvik Chakraborty. *Political Economy Research Institute*, 2019.

### Research Experience

Research Assistant to Prof. Robert Pollin, UMass Amherst May 2017-Present

- Conduct research in the areas of ecological macroeconomics and energy transitions

- Research Assistant to Prof. James K. Boyce, UMass Amherst Mar.-Dec. 2017
- Conducted research on the air quality co-benefits of climate policies and the distributional impacts of carbon dividend policies

### Research Interests

- Global inaction on climate change
- Clean energy transitions
- Environmental justice
- Theories of sustainable development

### Teaching Experience

Online Instructor, University of Massachusetts Amherst Dec.-May 2020

Courses: Introduction to Political Economy (Spring 2020), Intermediate Political Economy (Winter 2020)

Teaching Assistant, University of Massachusetts Amherst Sep. 2015-Dec. 2019

Courses: Introduction to Macroeconomics (Fall 2015, Spring 2016, Fall 2016, Spring 2017), Introduction to Microeconomics (Fall 2019)

Instructor, Center for Popular Economics, Amherst, MA Aug. 2017

Courses: Center for Popular Economics Summer Institute (a week-long intensive, introductory political economy course for activists and community members)

### Teaching Interests

#### Environmental and Ecological Economics

- The Political Economy of the Environment / Sustainable Development / Climate Crisis
- Environmental and Ecological Economics
- Environmental Policy
- Ecological Macroeconomics

#### Political Economy

- Introductory/Advanced Political Economy
- Political Economy and Intersectionality

#### Economics Core Courses

- Introductory/Intermediate Macroeconomics
- Econometrics
- Introductory/Intermediate Microeconomics

**Awards and Honors**

Dissertation Fellowship, Political Economy Research Institute, UMass Amherst	Jan.-May 2021
Wind Energy Fellows, University of Massachusetts Amherst	Sep. 2019-May 2020
Qualifying Exam in Environmental Economics, Passed with Distinction	Jan. 2018
<i>Phi Beta Kappa</i> , Luther College	Apr. 2011

**Seminars and Presentations**

Union for Radical Political Economics 50 <sup>th</sup> Anniversary Conference, Amherst, MA Paper presented: "Economics and Climate Justice Activism: Assessing the Fossil Fuel Divestment Movement"	Sep. 2018
Eastern Economics Association Meetings, Boston, MA Paper presented: "From Fossil Fuel Divestment to a Green New Deal"	Mar. 2018
The New School-UMass Economics Graduate Student Workshop Paper presented: "The Co-benefits of Climate Change Mitigation: Accounting for Spatial, Economic, & Racial Inequality"	Nov. 2016

**Professional Service**

Referee: <i>Energy Research and Social Science</i>	Sep. 2020-Present
Faculty Search Committee, University of Massachusetts Amherst	Sep. 2019-Feb. 2020
Graduate Student Pedagogy Committee, UMass Amherst	Sep. 2016-May 2017

**Other Relevant Positions**

Chair of Steering Committee, Center for Popular Economics, Amherst, MA	May 2017-Present
Data Analyst, Product Evaluations Inc., Oak Brook, IL	Sep. 2012-Jan. 2016
Middle School Math Instructor, AmeriCorps, St. Paul Park, MN	Aug. 2011-Jul. 2012

**References**

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Distinguished Professor of Economics  
Co-director, Political Economy Research Institute  
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## Dissertation Summary

### **Title: “Three Essays on the Political Economy of Global Inaction on Climate Change”**

The 2015 Paris Agreement sought to minimize the risk of future climate devastation by committing governments to limiting the rise in global average temperature to 1.5-2 °C above preindustrial levels. In the years since, governments in all regions of the world have continually failed to act at the scale and pace necessary to achieve this target. My dissertation contributes three essays on understanding the political economy of global inaction on climate change and how to overcome it.

### **Essay 1: “A Political Economic Framework to Analyze Global Inaction on Climate Change”**

I begin by critically reviewing the main theoretical frameworks of environmental political economy used to analyze climate change inaction, and developing an alternative. I argue that existing frameworks suffer from applying general theories of how economic activity leads to environmental degradation to the specific crisis of climate change. Analyzing the political economy of climate inaction requires disaggregation and context-specific analysis of both sustainability and economy, i.e., discerning the particular requirements for solving climate change within historically-specific variants of capitalism. My proposed framework treats capitalism itself as a constraint in the short to medium term, and specific institutional structures of capitalist economies, e.g., the energy system, as malleable. Identifying and analyzing obstacles to climate stabilization in this framework focuses on material, ideological, and political interests, and the institutions that impinge upon climate politics.

### **Essay 2 (Job Market Paper): “Stranded Assets and Reduced Profits: Analyzing the Economic Underpinnings of the Fossil Fuel Industry’s Resistance to Climate Stabilization”**

This paper explores one key constraint on global action to combat climate change: resistance mounted by the fossil fuel industry. The economic losses that the fossil fuel industry is likely to incur from a transition to clean energy include stranded assets (i.e., the devaluation of fossil fuel reserves and capital goods) and reduced profitability. Using a methodology that emulates the expectations and valuation procedures used by fossil fuel firms, I estimate the magnitude of wealth losses from stranded assets for the upstream fossil fuel industry (i.e., the firms and governments involved in fossil fuel extraction) under 2 °C and 1.5 °C climate stabilization scenarios. I estimate the distribution of these losses by region, between private firms and governments, and among the oil and gas majors. I also compare profits, profit margins, and market capitalization between fossil fuel and renewable energy firms for the period 2010-2019. Results show that fossil fuel reserves will suffer a devaluation of 37%-44%, amounting to \$13-\$15 trillion, while losses due to stranded investments in capital goods will be comparatively trivial. Together these imply a strong economic incentive for industry to continue on the path of resisting climate stabilization. About half (45%-63%) of the reserve devaluation stems not from fuels left in the ground but from price decreases for fuels that will still be extracted and sold during climate stabilization, leading to the conclusion that even low-cost producers stand to bear large losses. Three-quarters of stranded assets belong to governments, implying more formidable political obstacles to climate stabilization policies in nations with nationalized fossil fuel ownership. The energy industry comparison reinforces these findings, showing that fossil fuel firms remain substantially more profitable than renewable energy firms.

### **Essay 3: “A State-level Analysis of the Variation in Climate Policy Strength in the USA”**

My last essay explores how two interrelated trends have contributed to climate change inaction in the U.S.: (1) the rise of the climate change counter-movement (CCCM), encompassing misinformation campaigns and political lobbying; and (2) the increasing levels of inequality and accompanying economic insecurity for the poor, working, and middle classes. Theoretically, inequality shifts the balance of power toward those who benefit most from the fossil fuel economy. Economic insecurity further depresses the power of the potential coalition for climate stabilization by lowering climate change as a political priority and enervating and dividing this coalition. Using state-level panel data, I test how the CCCM, rising inequality, and rising economic insecurity affect climate policy strength.