Dissertation Abstract

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Three Essays on the Political Economy of the Environment

My Ph.D. research topic is the political economy of the environment in the context of economic development and globalization.


In this paper, I examine the dimensions of environmental inequality in China. I utilize a methodology that involves identifying population groups that are economically and politically disadvantaged, choosing a meaningful spatial unit of analysis, building a dataset for measuring the exposure to environmental harms and the population social and economic status, choosing and estimating appropriate econometric models, and interpreting the results in the context of China. Using the 2010 China county-level Census data and the Ministry of Environmental Protection’s list of air pollution-intensive industrial facilities, this paper shows that counties with a higher percentage of population working as enterprise managers and government and party officials tend to have fewer industrial facilities that are air-pollution intensive.


This paper examines how pollution-intensive industrial facilities’ location choice and the migrant population’s choice of migration destination contribute to the migrant population’s exposure to disproportionately high levels of industrial air pollution in China. The econometric analysis shows that new pollution-intensive industrial facilities do not disproportionately locate in counties where migrants make up a higher percentage of a county’s total population, while the migrants tend to move to counties which get a larger number of new major industrial air polluting facilities. For mitigating the impact of the industrial air pollution on the migrant population, it is necessary to strengthen the regulations on industrial air pollution, improve the migrant population’s income, and improve their access to health care.

Essay 3. “Global Value Chains, Production Fragmentation, and International Environmental Offshoring of the Manufacturing Industries”

International trade has been more and more organized through global value chains. The relationship between globalization and the environment is a central issue in the literature on international trade, development economics, and environmental economics. The organization of trade through global value chains leads to a new issue of international environmental offshoring. Using the World Input-Output Database and data from the World Bank, this paper examines two mechanisms of international environmental offshoring: do manufacturing industries tend to
offshore more of their production activities to foreign countries with lower air emission standards; and do manufacturing industries tend to offshore more if their domestic air emission standards are higher? The empirical analysis examines eight types of air pollutants. The findings show that both mechanisms of international environmental offshoring are taking place on a global scale for carbon dioxide emissions that contribute to global warming; ammonia, nitrogen oxide and sulfur oxide emissions that contribute to country-specific acidification; and carbon monoxide emissions that contribute to ozone formation.