W. Reed Walker

Columbia University
Department of Economics
1022 International Affairs Building
420 West 118th Street
Citizenship: United States

Phone: (315) 382-4986
Email: rw2157@columbia.edu
Homepage: http://www.columbia.edu/~rw2157/

Education

Ph.D. Economics, Columbia University, *expected* 2012.

M.A. Economics, Columbia University, 2009.

B.A. Mathematical Economics, Colgate University, 2004.

Fields of Interest

Environmental Economics, Public Economics, Labor Economics

Research

Job Market Paper

The Transitional Costs of Sectoral Reallocation: Evidence from the Clean Air Act and the Workforce

New environmental regulations lead to a rearrangement of production away from polluting industries, and workers in those industries are adversely affected. This paper uses linked worker-firm data in the United States to estimate the transitional costs associated with reallocating workers from newly regulated industries to other sectors of the economy. The focus on workers rather than industries as the unit of analysis allows me to examine previously unobserved economic outcomes such as non-employment and long run earnings losses from job transitions, both of which are critical to understanding the reallocative costs associated with these policies. Using panel variation induced by the 1990 Clean Air Act Amendments (CAAA), I find that the reallocative costs of environmental policy are significant. Workers in newly regulated plants experienced, in aggregate, more than $9 billion in foregone earnings for the years after the change in policy. Most of these costs are driven by non-employment and lower earnings in future employment, while earnings of workers who remain with their firm change little. Relative to the estimated benefits of the 1990 CAAA, these one-time transitional costs are small. However, the estimated costs far exceed the workforce compensation policies designed to mitigate some of these earnings losses.

Publications

Traffic Congestion and Infant Health: Evidence from E-ZPass, with Janet Currie
American Economic Journal: Applied Economics 3(1): 65-90, 2011

We exploit the introduction of electronic toll collection, (E-ZPass), which greatly reduced both traffic congestion and vehicle emissions near highway toll plazas. We show that the introduction of E-ZPass reduced prematurity and low birth weight among mothers within 2 kilometers (km) of a toll plaza by 10.8 percent and 11.8 percent, respectively, relative to mothers 2-10 km from a toll plaza. There were no immediate changes in the characteristics of mothers or in housing prices near toll plazas that could explain these changes. The results are robust to many changes in specification and suggest that traffic congestion contributes significantly to poor health among infants.

Environmental Regulation and Labor Reallocation,
American Economic Review: Papers and Proceedings. 101(2): 2011

This paper uses newly available data on plant level regulatory status linked to the Census Longitudinal Business Database (LBD) to measure the impact of changes in county level environmental regulations on plant and sector employment levels. Estimates from a variety of specifications suggest a strong connection between changes in environmental regulatory stringency and both employment growth and levels in the affected sectors. The preferred estimates suggest that changes in county level regulatory status due to the Clean Air Act Amendments of 1990 reduced the size of the regulated sector by as much as 15 percent in the 10 years following the changes.

Explaining the Determinants of Operating Budgets at U.S. National Parks,
Public Finance Review. 34(5): 551-573, 2006.

Working Papers and Papers Under Review

Toxic Releases and Health at Birth: Evidence from Plant Closures,
with Janet Currie, Lucas Davis, and Michael Greenstone

Exposure to toxic pollutants is widely believed to be an important determinant of infant health, but the available empirical evidence is extremely limited. In this paper we develop a new approach that focuses on openings and closings of plants. We find that controlling for maternal characteristics, the incidence of low birthweight among infants within one mile of a plant increases when the plant is operating, and decreases when the plant closes, compared to infants one to two miles from a plant. We then use openings and closings as an instrument for the amount of toxic emissions in order to characterize the relationship between emissions and low birthweight.

Air Pollution and Contemporaneous Health: Evidence from Random Variation in Pollution Shocks from Airports, with Wolfram Schlenker

We show how daily variation in ground level airport congestion in California that is due to network delays significantly affects both local pollution levels and local health outcomes. In doing so, we develop a framework through which to credibly estimate the effects of daily variation in local air pollution on health outcomes using this quasi-experimental design. Instrumental variable estimates suggest that daily increases in air pollution lead to increased hospitalizations for asthma, respiratory, and heart related diagnoses that are an order of magnitude larger than conventional estimates. We find that a one standard deviation increase in the amount of time airplanes spend idling on the runway at Los Angeles International Airport leads to an $129 thousand increase in emergency care expenditures for regions within 10km (6.2 miles) of the airport. We find no effect of forward displacement, and suggestive evidence that CO levels below current ambient standards are primarily responsible for the health effects. Overall, our work suggests that local congestion externalities are an important, neglected cost of transportation congestion.

Invited and Conference Presentations

Cornell University: Dyson School of Applied Economics and Management (scheduled)

Arizona State, Dept. of Economics and Center for Environmental Economics and Sustainability Policy, October 2011

Yale School of Management and School of Forestry Environmental Economics Seminar, September 2011

NBER Summer Institute: Environmental and Energy Economics Research Sketch July 2011.

Association of Environmental and Resource Economists, Summer Conference, Seattle, WA, June 2011.

NBER: Spring Environmental and Energy Economics Meeting, Stanford, CA, April 2011.

The Allied Social Science Association Meetings (×2), Denver, CO, January 2011.

Center for Economic Studies. United States Census Bureau, December 2010

World Congress of Environmental and Resource Economics, Montreal, QC, July 2010.

NBER: Spring Environmental and Energy Economics Meeting, Cambridge, MA, March 2010.

The Allied Social Science Association Meetings, Atlanta, GA, January 2010.

NBER Summer Institute: Environmental and Energy Economics Research Sketch July 2009.

Academic Experience

Columbia University, Department of Economics

Research Assistant, Janet Currie, July 2008–Present.

Teaching Assistant, Environmental Economics Fall 2009.

Teaching Assistant, Intermediate Microeconomics, Spring 2011.

Latin American and Caribbean Environmental Economics Program

Teaching Assistant, Environmental Economics and Climate Change Issues, Summer 2009.

Affiliations

Member, Association of Environmental and Resource Economists, 2008–Present.

U.S. Census Bureau Special Sworn Researcher: 2009–Present

Honors, Awards, & Fellowships

Resources for the Future, Joseph L. Fisher Doctoral Dissertation Fellowship 2011-2012

Data Gathering for Dissertation and Early Career Research on Pollution Control Aspects of Environmental Economics, Environmental Protection Agency 2010-2011 (*Primary Investigator*)

Summer Research Fellowship, Columbia University, 2009, 2010

Columbia University Presidential Fellowship 2008-2012.

Professional Activities

Referee for *Review of Economics and Statistics*, *Journal of Public Economics*, *Journal of Environmental Economics and Management*

References

Janet Currie
Professor of Economics
and Policy Affairs
Princeton University
(609) 258-7393
jcurrie@princeton.edu

Wolfram Schlenker
Assistant Professor
of Economics
Columbia University
(212) 854-1806
wolfram.schlenker@columbia.edu

Till von Wachter
Associate Professor
of Economics
Columbia University
(212) 854-5712
vw2112@columbia.edu