

October 2016

Curriculum Vitae

Wayne B. Gray

76 Lower Gore Road  
Webster, MA 01570  
(508) 943-6036

Department of Economics  
Clark University  
950 Main Street  
Worcester, MA 01610  
(508) 793-7693

EDUCATION

- 1984          Ph.D. in Economics, Harvard University
- 1979          M.A. in Economics, Harvard University
- 1977          A.B. in Economics and Mathematics, summa cum laude,  
Dartmouth College

EMPLOYMENT

- 2002-          Full Professor, Clark University
- 1991-2002      Associate Professor, Clark University.
- 1984-1991      Assistant Professor, Clark University.  
Undergraduate: Labor Economics, Issues and Perspectives,  
Intermediate Microeconomic Theory, Principles of Economics  
Graduate: Applied Econometrics, Labor Economics
- 1993-          Director, Census Bureau's Boston Census Research Data Center.  
Provide link between Census Bureau and research community.  
Solicit and help review proposals for research projects.
- 1983-          Research Economist, National Bureau of Economic Research.  
Maintain Bureau's computer programs and databases.  
Provide high-level computer advice and consultation  
to other researchers.
- 1978-83        Research Assistant, National Bureau of Economic Research.
- 1977          Research Assistant, Office of the Assistant Secretary for Policy  
Evaluation and Research, U.S. Department of Labor,  
Washington, D.C.

- 2016 Outstanding Graduate Teaching Award, Clark University
- 2012- NSF Grant (Co-PI with Debarshi Nandy and Karthik Krishnan) "Market Access and Border Entrepreneurship"
- 2011- Member, EPA's Environmental Economics Advisory Committee  
2011-2012 Member, National Research Council Committee on Inherently Safer Chemical Processes: The Use of Methyl Isocyanate at Bayer CropScience
- 2009- John T. Croteau Endowed Chair in Economics, Clark University
- 2006-2007 Member, Science Advisory Board for Massachusetts Executive Office of Environmental Affairs
- 2005- Member, Conference on Research in Income and Wealth
- 2005-2006 Member, National Research Council Committee on Changes in New Source Review Programs for Stationary Sources of Air Pollutants
- 2005-2008 EPA Grant "Why Do Plants Comply with Regulation: The Importance of Enforcement Activity, Abatement Costs, and Community Pressure".
- 2004-2010 Member, EPA's Advisory Council on Clean Air Compliance Analysis.
- 2003-2005 Member, Expert Review Panel for Revisions to EPA's Pollution Abatement Costs and Expenditures Survey Instrument
- 2003-2007 NIOSH Grant (Co-PI with John Mendeloff PI) "Causes and Effects of Compliance with OSHA Standards"
- 2001-2005 EPA Grant "Corporate Environmental Performance and the Effectiveness of Government Interventions"
- 1999-2000 OSHA Grant "Linking OSHA and BLS Data at the Plant Level"
- 1998-2001 NSF Grant "Industrial Restructuring and Corporate Risk Management"
- 1997-2000 EPA Grant "Environmental Regulation and Productivity Benefits in the Paper Industry"
- 1994-97 NSF Grant "State Environmental Regulation and Manufacturing Plant Location"
- 1993- Researcher at Census Bureau's Boston Research Data Center
- 1993-1999 NSF Grants for supporting Census Bureau's Boston Research Data Center through NBER: 1993-1997 and 1997-1999
- 1992-94 EPA Grant "Impact of Cross-State Variation in Pollution Regulation"
- 1991-93 ASA-NSF-Census Fellowship for research at the Census Bureau on "Regulation and Productivity at the Plant Level"
- 1990-93 NSF Grant "Enforcement and Compliance Decisions under OSHA and EPA Regulation"
- 1991- Research Associate, National Bureau of Economic Research, in NBER Programs in Productivity, Labor Studies, and Environmental and Energy Economics
- 1985-1991 Faculty Research Fellow, National Bureau of Economic Research, in NBER Programs in Productivity and Labor Studies

## PUBLICATIONS

Wayne Gray, "Environmental Regulations and Business Decisions", IZA World of Labor, September 2015, <http://wol.iza.org/articles/environmental-regulations-and-business-decisions>.

Anna Belova, Wayne B. Gray, Joshua Linn, Richard D. Morgenstern, and William Pizer, "Estimating the Job Impacts of Environmental Regulation", Journal of Benefit Cost Analysis, June 2015, 6(2): 325-340.

Gray, Wayne B., Ronald J. Shadbegian, Chunbei Wang, Merve Meral, "Do EPA regulations affect labor demand? Evidence from the pulp and paper industry", Journal of Environmental Economics and Management, 68(2014), pp. 188–202.

Wayne Gray and Ronald Shadbegian, "Do the Job Effects of Regulation Differ with the Competitive Environment?" in Jobs and Regulation, edited by Cary Coglianese, Adam Finkel and Chris Carrigan, University of Pennsylvania Press, 2014.

Amelia Haviland, Rachel Burns, Wayne Gray, Teague Ruder, and John Mendeloff, "A New Estimate of the Impact of OSHA Inspections on Manufacturing Injury Rates, 1998-2005," American Journal of Industrial Medicine, November 2012, pp. 964-975.

Ronald Shadbegian, and Wayne Gray, "Spatial Patterns in Regulatory Enforcement: Local Tests of Environmental Justice" in Political Economy of Environmental Justice, H. Spencer Banzhaf, ed., Stanford University Press, 2012.

Wayne Gray, Ronald Shadbegian, and Ann Wolverton, "Environmental Justice: Do Poor and Minority Populations Face More Hazards?" in Oxford Handbook of the Economics of Poverty, Philip N. Jefferson, ed., Oxford University Press, 2012.

Wayne Gray and Jay Shimshack, "The Effectiveness of Environmental Monitoring and Enforcement: A Review of the Empirical Evidence", Review of Environmental Economics and Policy, 2011, pp.3-24.

Amelia Haviland, Rachel Burns, Wayne Gray, Teague Ruder, and John Mendeloff, "What Kinds of Injuries do OSHA Inspections Prevent?", Journal of Safety Research, 2010, pp. 339-345.

Kilkon Ko, John Mendeloff, and Wayne Gray. "The Role of Inspection Sequence in Compliance with OSHA Standards: Interpretations and Implications," Regulation & Governance, 2010, pp. 48-70.

Hangsheng Liu, Rachel M. Burns, Agnes G. Schaefer, Teague Ruder, Christopher Nelson, Amelia M. Haviland, Wayne B. Gray and John Mendeloff, "The Pennsylvania certified safety committee program: An evaluation of participation and effects on work injury rates," American Journal of Industrial Medicine, 2010, pp. 780–791.

Lori Lynch, Wayne Gray, and Jacqueline Geoghegan. "An Evaluation of Working Land and Open Space Preservation Programs in Maryland: Are they Paying too Much?" In New Perspectives on Agri-Environmental Policies: A Multidisciplinary and Transatlantic Approach. Editors: Stephan J. Goetz and Floor Brouwer. Oxford, UK: Routledge Publishers, 2009.

## PUBLICATIONS (cont.)

Lori Lynch, Wayne Gray, and Jacqueline Geoghegan, "Are Farmland Preservation Programs Easement Restrictions Capitalized into Farmland Prices? What can a Propensity Score Matching Analysis Tell Us?" Review of Agricultural Economics, Fall 2007, pp. 502-509.

Mary E. Deily and Wayne B. Gray, "Agency Structure and Firm Culture: OSHA, EPA, and the Steel Industry," The Journal of Law, Economics, and Organization, October 2007, pp. 685-709.

Wayne B. Gray and Ronald J. Shadbegian, "The Environmental Performance of Polluting Plants: A Spatial Analysis", Journal of Regional Science, February 2007, pp. 63-84.

Ronald J. Shadbegian, Wayne B. Gray, and Cynthia Morgan, "Benefits and Costs From Sulfur Dioxide Trading: A Distributional Analysis" in Acid in the Environment: Lessons Learned and Future Prospects (Gerald R. Visgilio and Diana M. Whitelaw, eds), Springer Science+Business Media: New York, 2007.

Ronald J. Shadbegian and Wayne B. Gray, "Assessing Multi-Dimensional Performance: Environmental and Economic Outcomes," Journal of Productivity Analysis, December 2006, pp. 213-234.

Jacqueline Geoghegan and Wayne B. Gray, eds. Spatial Environmental Policy. International Library of Environmental Economics and Policy. Aldershot, UK, Ashgate, 2006.

Ronald J. Shadbegian and Wayne B. Gray, "Pollution Abatement Expenditures and Plant-Level Productivity: A Production Function Approach", Ecological Economics, August 2005, pp. 196-208.

Wayne B. Gray and John Mendeloff, "The Declining Effects of OSHA Inspections on Manufacturing Injuries: 1979 to 1998", Industrial and Labor Relations Review, July 2005, pp. 571-587.

Jacqueline Geoghegan and Wayne B. Gray, "Spatial Environmental Policy." in The International Yearbook of Environmental and Natural Resource Economics 2005/2006: A Survey of Current Issues. Henk Folmer and Thomas Tietenberg, eds. Cheltenham, UK, Edward Elgar Publishing, 2005.

Wayne B. Gray and Ronald J. Shadbegian, "When and Why do Plants Comply? Paper Mills in the 1980s", Law and Policy, April 2005, pp. 238-261.

John Mendeloff and Wayne B. Gray, "Inside the Black Box: How Do OSHA Inspections Lead to Reductions in Workplace Injuries?" Law and Policy, April 2005, pp. 219-237.

Wayne B. Gray and Ronald J. Shadbegian, "Optimal Pollution Abatement: Whose Benefits Matter and How Much?" Journal of Environmental Economics and Management, May 2004, pp. 510-534.

Ronald J. Shadbegian and Wayne B. Gray, "What Determines Environmental Performance at Paper Mills? The Roles of Abatement Spending, Regulation, and Efficiency" Topics in Economic Analysis & Policy, November 2003, <http://www.bepress.com/bejeap/topics/vol3/iss1/art15>.

Wayne B. Gray and Ronald J. Shadbegian, "Plant Vintage, Technology, and Environmental Regulation", Journal of Environmental Economics and Management, November 2003, pp. 384-402.

## PUBLICATIONS (cont.)

Wayne B. Gray, ed., Economic Costs and Consequences of Environmental Regulation, Ashgate Publications, 2002.

Wayne B. Gray and Ronald J. Shadbegian, "Pollution Abatement Costs, Regulation, and Plant-Level Productivity", in Economic Costs and Consequences of Environmental Regulation, 2002

Roger Kasperson, Jeane Kasperson, Scott Jiusto, Joseph Sarkis and Wayne Gray, "Industrial Restructuring and Corporate Risk Management" in Foresight and Precaution, M.P. Cottam, D.W. Harvey, R.P. Pape and J. Tait, eds. Rotterdam: A.A. Balkema, 2000, pp. 1193-1198.

Wayne B. Gray and Ronald J. Shadbegian, "Environmental Regulation, Investment Timing, and Technology Choice", Journal of Industrial Economics, June 1998, pp. 235-256.

John T. Scholz and Wayne B. Gray, "Can Government Facilitate Cooperation? An Informational Model of OSHA Enforcement," American Journal of Political Science, July 1997, pp. 693-717.

Wayne B. Gray and Mary E. Deily, "Compliance and Enforcement: Air Pollution Regulation in the U.S. Steel Industry", Journal of Environmental Economics and Management, July 1996, pp. 96-111

Wayne B. Gray and John T. Scholz, "Does Regulatory Enforcement Work? A Panel Analysis of OSHA Enforcement", Law and Society Review, June 1993, pp 177-213.

Wayne B. Gray and Carol Adaire Jones, "Longitudinal Patterns of Compliance with OSHA in the Manufacturing Sector", Journal of Human Resources, Fall 1991, pp. 623-653.

Mary E. Deily and Wayne B. Gray, "Enforcement of Pollution Regulations in a Declining Industry", Journal of Environmental Economics and Management, Fall 1991, pp. 260-274.

Wayne B. Gray and Carol Adaire Jones, "Are OSHA Health Inspections Effective? A Longitudinal Study in the Manufacturing Sector", Review of Economics and Statistics, August 1991, pp. 504-508.

Wayne B. Gray and John T. Scholz, "Analyzing the Equity and Efficiency of OSHA Enforcement", Law and Policy, July 1991, pp. 185-214.

Wayne B. Gray, "Impact of OSHA and EPA Regulation on Productivity," Journal of Regulation and Social Costs, June 1991, pp. 25-47.

John T. Scholz and Wayne B. Gray, "A Behavioral Approach to Compliance: OSHA Enforcement's Impact on Workplace Accidents", Journal of Risk and Uncertainty, September 1990, pp. 283-305.

Attiat Ott and Wayne B. Gray, The Massachusetts Health Plan: The Right Prescription?. Boston: The Pioneer Institute for Public Policy Research, 1988.

Wayne B. Gray, "The Cost of Regulation: OSHA, EPA and the Productivity Slowdown", American Economic Review, December 1987, 998-1006.

## PUBLICATIONS (cont.)

Wayne B. Gray, Productivity versus OSHA and EPA Regulations, Ann Arbor: UMI Research Press, 1986.

Albert E. Rees and Wayne B. Gray. "Family Effects in Youth Employment." In The Youth Labor Market Problem: Its Nature, Causes and Consequences, edited by Richard B. Freeman and David A. Wise, pp. 453-474. Chicago: University of Chicago Press, 1982.

## OTHER RESEARCH PAPERS

Ann E. Ferris, Wayne Gray, Ronald Shadbegian, and Ann Wolverton, "Do Renewable Portfolio Standards Affect Manufacturing Activity Through Higher Electricity Prices?" Presented at IZA workshop on Labor Market Effects of Environmental Policies in September 2014, NBER Environmental and Energy Economics program meeting, March 2015.

Wayne B. Gray and Ronald J. Shadbegian, "Multimedia Pollution Regulation and Environmental Performance: EPA's Cluster Rule". Presented at RFF Regulatory Policy Initiative workshop, December 2014.

Wayne B. Gray and Ronald J. Shadbegian, "Regulatory Regime Changes Under Federalism: Do States Matter More?" Presented at EPA Environmental Behavior and Decision-Making Conference, New York, January 2008, revised October 2014.

Anna Belova, Wayne B. Gray, Joshua Linn, and Richard D. Morgenstern. "Environmental Regulation And Industry Employment: A Reassessment", Census Bureau Center for Economic Studies Working Paper 13-36, July 2013.

Ronald Shadbegian and Wayne Gray, "What Determines the Opportunity Cost of Pollution Abatement? A Production Function Approach." Presented at Asia-Pacific Productivity Conference, Taipei, July 2008.

Ronald J. Shadbegian, Wayne B. Gray, and Cynthia Morgan, "A Spatial Analysis of the Consequences of the SO2 Trading Program" Presented at Third World Congress of Environmental and Resource Economists, Kyoto, July 2006.

Wayne B. Gray and Ronald J. Shadbegian, "When do Firms Shift Production Across States to Avoid Environmental Regulation?" Presented at First World Congress of Environmental and Natural Resource Economists, Venice, June 1998. NBER Working Paper 8705, January 2002.

Wayne B. Gray, "Environmental Compliance at Paper Mills: The Role of Regulatory Enforcement and Corporate Restructuring", presented at ASSA meetings, January 2000.

Wayne B. Gray, "Manufacturing Plant Location: Does State Pollution Regulation Matter?", NBER Working Paper 5880, January 1997.

Eric Bartelsman and Wayne B. Gray, "The NBER Manufacturing Productivity Database", NBER Technical Working Paper 205, October 1996.