

## VITA

**NAME:** Martin L. Weitzman

**CURRENT POSITION:** Research Professor of  
Economics  
Harvard University

**BIRTH:** New York, N.Y., April 1, 1942

**ADDRESS:** Department of Economics  
Harvard University  
Littauer 313  
Cambridge, MA 02138

**EDUCATION:** Swarthmore College  
Mathematics and Physics, B.A., 1963

Stanford University  
Statistics and Operations Research, M.S., 1964

Massachusetts Institute of Technology  
Economics, Ph.D., 1967

**ACADEMIC POSITIONS:**

1967-70: Assistant Professor of Economics, Yale University  
1970-72: Associate Professor of Economics, Yale University  
1972-74: Associate Professor of Economics, MIT  
1974-89: Professor of Economics, MIT  
1986-89: Mitsui Professor, MIT  
1989-2018: Professor of Economics, Harvard University  
2018- Research Professor of Economics, Harvard University

**CURRENT RESEARCH INTERESTS:**

Environmental and Natural Resource Economics, Climate Change, Discounting, Economics of Catastrophes, Cost-Benefit Analysis, Comparison of Alternative Instruments for Controlling Pollution, Green Accounting, Economics of Biodiversity, Role of Uncertainty in Environmental Economics.

**AWARDS:**

Guggenheim Fellow, 1970-71 (spent on leave in the USSR)  
Elected fellow of the Econometric Society, 1976

Elected fellow of the American Academy of Arts and Sciences, 1986

Three Special Awards (the most ever awarded to one individual) for “Publication of Enduring Quality” given by the Association of Environmental and Resource Economists (in 1996 for “Prices vs. Quantities” published in 1974; in 2011 for “The Noah’s Ark Problem” published in 1998; in 2018 for “Why the Far-Distant Future Should Be Discounted at Its Lowest Possible Rate” published in 1998).

Keynote Speaker: 2002 World Congress of Environmental Economists

Keynote Speaker: 2006 World Congress of Animal Geneticists

Keynote Speaker: 2009 IPCC (Intergovernmental Panel on Climate Change) AR5 International Scoping Meeting

FEEM 20<sup>th</sup> Anniversary Prize given in 2010 to “researcher from anywhere in the world who has most significantly contributed to the development of the field of environmental and resource economics over the last 20 years”

Leontief Prize for “advancing the frontiers of economic thought,” awarded 2011

2011 Tanner Lecture at Oxford University

E-On Prize for best Economics E-journal article, awarded 2010

2011 Condliffe Lecture at Canterbury University, NZ

Eric Kemp Prize for best paper in environmental and resource economics, awarded 2011

John Kenneth Galbraith Award (Agricultural & Applied Economics Association, 2013) “in recognition of breakthrough discoveries in economics and outstanding contributions to humanity through leadership, research and service.”

Max Weber Invited Lecture, EUI (Florence), 2015

## **PROFESSIONAL ACTIVITY:**

Service to: The World Bank, International Monetary Fund, Agency for International Development, Environmental Protection Agency, Congressional Budget Office, Canadian Parliamentary Committee on Employment, Icelandic Committee on Natural Resources, Member of National Academy Panel on Integrated Environmental and Economic Accounting, Review Editor for Intergovernmental Panel on Climate Change.

Associate Editor: *Journal of Comparative Economics, Economic Letters, Journal of Japanese and International Economics, Journal of Environmental Economics and Management, Journal of the Association of Environmental and Resource Economists, Economics of Climate Change, Review of Environmental Economics and Policy*

**MAJOR PUBLICATIONS (most recent first):**

[“Potentially Large Equilibrium Climate Sensitivity Tail Uncertainty.”](#) *Economics Letters* [Internet]. 2018; 168: 144-146.

[“On a World Climate Assembly and the Social Cost of Carbon.”](#) *Economica*. 2017; 84 (336): 559-586.

[“A Tight Connection Among Wealth, Income, Sustainability, and Accounting in an Ultra-Simplified Setting.”](#) In: [National Wealth: What is Missing, Why it Matters](#). New York: Oxford University Press; 2017.

[“How a Minimum Carbon Price Commitment Might Help to Internalize the Global Warming Externality.”](#) In: [Global Carbon Pricing: The Path to Climate Cooperation](#). Cambridge: MIT Press; 2017. pp. 125-148.

[“Voting on Prices vs. Voting on Quantities in a World Climate Assembly.”](#) *Research in Economics*. 2017; 71 (2): 199-211. ([pre-publication version](#))

[“A Voting Architecture for the Governance of Free-Driver Externalities, with Application to Geoengineering”](#) *Scandinavian Journal of Economics*: 2015; 117(4): 1049-1068.

[“Internalizing the Climate Externality: Can a Uniform Price Commitment Help?”](#). *Economics of Energy & Environmental Policy*. 2015; 4(2): 37-50.

[Climate Shock](#) (co-author with Gernot Wagner). Princeton University Press; 2015 (Translated into five languages)

[“Can Negotiating a Uniform Carbon Price Help to Internalize the Global Warming Externality?”](#) *Journal of the Association of Environmental and Resource Economists* Volume 1, Issue ½, (2014) Pages 29-49.

[“Fat Tails and the Social Cost of Carbon”](#) *American Economic Review*: Volume 104, Issue 5 (2014) Pages 544-546.

[“Should Governments Use a Declining Discount Rate in Project Analysis?”](#) *Review of Environmental Economics and Policy*: Volume 8, Issue 2, (2014) Pages 145-165.

[“A Precautionary Tale of Uncertain Tail Fattening.”](#) *Environmental and Resource Economics*: Volume 55, Issue 2 (2013), Pages 159-173

[“Determining Benefits and Costs for Future Generations”](#) *Science*: Volume 341(2013) pages 349-350.

[“The Geoengineered Planet, Chapter 10 of “In One Hundred Years”](#) *Palacios-Huerta, In One Hundred Years*. MIT Press (2013)

[“Tail-Hedge Discounting and the Social Cost of Carbon.”](#) *Journal of Economic Literature*: Volume

51, Issue 3 (2013), Pages 873-882.

[“The Ramsey Discounting Formula for a Hidden-State Stochastic Growth Process,”](#) Journal of Environmental and Resource Economics (vol. 53, no. 3, pp. 309-321) November, 2012.

[“GHG Targets as Insurance Against Catastrophic Climate Damages,”](#) Journal of Public Economic Theory, 14(2), 221-244 (2012).

[“Fat-Tailed Uncertainty in the Economics of Climate Change,”](#) Review of Environmental Economic Policy, 5(2), 275-292 (Summer 2011).

(with Christian Gollier) [“How Should the Distant Future Be Discounted When Discount Rates Are Uncertain?”](#) Economic Letters, 107(3), 350-353 (June, 2010).

[“Some Dynamic Economic Consequences of the Climate Sensitivity Inference Dilemma,”](#) Chapter 8 pp. 187-206 in Aronsson and Lofgren (eds.), Handbook of Environmental Accounting, Edward Elgar (2010).

[“What is the ‘Damages Function’ for Global Warming – and What Difference Might it Make?”](#) Climate Change Economics, 1(1), 57-69 (2010).

[“Risk-Adjusted Gamma Discounting,”](#) Journal of Environmental Economics and Management, 2010; 60, 1-13.

[“Book Review of Bjorn Lomborg’s Smart Solutions to Climate Change: Comparing Costs and Benefits,”](#) Nature, 467(7317), 784-785 (2010).

[“Additive Damages, Fat-Tailed Climate Dynamics, and Uncertain Discounting,”](#) Economics, number 2009-39 (October 28, 2009).

[“On Modeling and Interpreting the Economics of Catastrophic Climate Change,”](#) *Review of Economics and Statistics*, 91(1), 1-19 (February 2009).

[“Some Basic Economics of Climate Change,”](#) in J-P Touffut (ed.), *Changing Climate, Changing Economy*. Edward Elgar: 2009.

[“A Review of The Stern Review on the Economics of Climate Change,”](#) *Journal of Economic Literature*, 45(3), 703-724 (September, 2007).

[“Subjective Expectations and Asset-Return Puzzles,”](#) *American Economic Review*, 97(4), 1102-1130 (September, 2007).

[“Trees vs. Fish, or Discrete vs. Continuous Harvesting,”](#) in T. Aronsson, R. Axelsson and R. Brannlund (eds.), *The Theory and Practice of Environmental and Resource Economics*, Edward Elgar: 2006.

["The Bose Model and National Income,"](#) in S. Lahari and P. Maiti (eds.), *Economic Theory in a Changing World: Policymaking for Growth*, Oxford University Press: 2005.

["Stochastic Income and Wealth,"](#) *Japan and the World Economy*, 16, 277-301 (2004).

["Income, Wealth, and the Maximum Principle,"](#) *Harvard University Press, 2003*  
(Translated into five languages).

(with Raminan Laxminarayan) ["Value of Treatment Heterogeneity for Infectious Diseases,"](#) Chapter 3  
in Laxminarayan (ed.), *Battling Resistance to Antibiotics and Pesticides*. Washington, D.C.:  
Resources for the Future, 2003.

(with Thorvaldur Gylfason), ["Icelandic Fisheries Management: Fees vs. Quotas,"](#) submitted to *Scottish Journal of Economics*.

["Landing Fees vs. Harvest Quotas with Uncertain Fish Stocks,"](#) *Journal of Environmental Economics and Management*, 43, 325-338 (2002).

(with Ramanan Laximananarayan) ["On the Implications of Endogenous Resistance to Medications,"](#)  
*Journal of Health Economics*, 21, 709-718 (2002).

["A Contribution to the Theory of Welfare Accounting,"](#) *Scandinavian Journal of Economics*, 103(1), 1-23, March, 2001.

(with Geir Asheim) ["Does NNP Growth Indicate Welfare Improvement?,"](#) *Economics Letters*, 73 (2001)  
233-239.

["Gamma Discounting,"](#) *American Economic Review*, 91(1), 260-271, March 2001.

(with Karl-Gustaf Löfgren and Chuan-Zhong Li) ["Harvesting versus Biodiversity: An Occam's Razor Version,"](#) *Environmental and Resource Economics*, March, 2001.

["An 'Economics Proof' of a Separating Hyperplane Theorem,"](#) *Economics Letters*, 68(1), 1-6, 2000.

["Economic Profitability versus Ecological Entropy,"](#) *Quarterly Journal of Economics*, 115(1), 237-263,  
February, 2000.

["The Linearized Hamiltonian as Comprehensive NDP,"](#) *Environment and Development Economics*,  
February 2000.

["Just Keep Discounting, But..."](#) in Portney and Weyant (eds.), *Discounting and Intergenerational Equity*, Resources for the Future, 1999.

(Co-Author) ["Nature's Numbers: Expanding the National Income Accounts to Include the Environment,"](#) National Academy Press, 1999.

["Pricing the Limits to Growth from Minerals Depletion,"](#) *Quarterly Journal of Economics*, 114(2), 691-706, May 1999.

(with Andrew Metrick) ["Conflicts and Choices in Biodiversity Preservation,"](#) *Journal of Economic Perspectives*, 12(3), Summer 1998.

["The Noah's Ark Problem,"](#) *Econometrica*, 66(6), 1279-1298, November 1998.

["On the Welfare Significance of National Product under Interest-Rate Uncertainty,"](#) *European Economic Review*, 42(8), 1581-1594, Fall 1998.

["Recombinant Growth,"](#) *Quarterly Journal of Economics*, 113(2), 331-360, May 1998.

["Why the Far-Distant Future Should be Discounted at its Lowest Possible Rate,"](#) *Journal of Environmental Economics and Management*, 36(3), November 1998.

["Sustainability and Technical Progress,"](#) *Scandinavian Journal of Economics*, 99(1), 1-13, January 1997.

(with Karl-Gustaf Löfgren) ["On the Welfare Significance of Green Accounting as Taught by Parable,"](#) *Journal of Environmental Economics and Management*, 32(2), 139-153, February 1997.

(with Tomas Sjöström) ["Competition and the Evolution of Efficiency,"](#) *Journal of Economic Behavior and Organization*, 30(1), 25-43, July 1996.

["Diversity Functions,"](#) in Perrings, Holling, Maler, Jansson, and Folke (eds.), *Biodiversity Loss: Theoretical and Ecological Issues*, Cambridge University Press, 1996.

["Hybridizing Growth Theory,"](#) *American Economic Review*, 86(2), 207-212, May 1996.

(with Andrew Metrick) ["Patterns of Behavior in Biodiversity Preservation,"](#) *Land Economics*, 72(1), 1-16, February 1996.

["Incentive Effects of Profit Sharing and Employee Share Ownership: Theory and Evidence,"](#) in *Trends in Business Organization: Do Participation and Cooperation Increase Competitiveness?* Kiel, 1995.

(with Chenggang Xu) ["Chinese Township Village Enterprises as Vaguely Defined Cooperatives,"](#) *Journal of Comparative Economics*, May 1994.

["Monopolistic Competition with Endogenous Specialization,"](#) *Review of Economic Studies*, 61(1), 45-56, March 1994.

["On the 'Environmental' Discount Rate,"](#) *Journal of Environmental Economics and Management*, 26(2), 200-209, March 1994.

[“Economic Transition: Can Theory Help?”](#) *European Economic Review*, 37(2-3), 549-555, April 1993.

[“What to Preserve: An Application of Diversity Theory to Crane Conservation,”](#) *Quarterly Journal of Economics*, 108(1), 157-183, February 1993.

[“On Diversity,”](#) *Quarterly Journal of Economics*, 107(2), 363-405, May 1992.

[“How Not to Privatize,”](#) *Revista di Politica Economica*, December 1991.

[“Price Distortion and Shortage Deformation or What Happened to the Soap?”](#) *The American Economic Review*, 81(3), 401-414, June 1991.

(with R. Sah) [“A Proposal for Using Incentive Pre-Commitments in Public Enterprise Funding,”](#) *World Development*, 19(6), 595-605, June 1991.

(with Douglas Kruse) [“Profit Sharing and Productivity,”](#) in A. Blinder (ed.), *Paying for Productivity: A Look at the Evidence*, Brookings, 1990.

[“Reflections on Macroeconomics and Share Systems,”](#) in *Economic Journal Centenary*, Basil Blackwell, 1990.

[“The Promise of Profit Sharing”](#), in W.C. Huang (ed.), *Organized Labor at the Crossroads*, in W.E. Upjohn, 1989.

[“A Theory of Wage Dispersion and Job Market Segmentation,”](#) *Quarterly Journal of Economics*, 104(1), 121-137, February 1989.

[“Comments on ‘Can the Share Economy Conquer Stagflation?’”](#) *Quarterly Journal of Economics*, 103(1), 219-223, February 1988.

[“Consumer's Surplus as an Exact Approximation When Prices are Appropriately Deflated,”](#) *Quarterly Journal of Economics*, 103(3), 543-553, August 1988.

[“Increasing Returns and the Foundations of Unemployment Theory: Rejoinder,”](#) *The Economic Journal*, 98(389), 172-174, March 1988.

(with Richard Freeman) [“Bonuses and Employment in Japan,”](#) *Journal of Japanese and International Economies*, 1(2), 168-194, June 1987.

[“Employment and Profit Sharing,”](#) *Administration*, 35(3), 1987 (special issue on The Challenge of Unemployment).

[“Macroeconomic Aspects of Profit Sharing,”](#) in H.R. Nalbantian (ed.), *Incentives, Cooperation, and Risk Sharing*, Rowman and Littlefield, 1987.

["Share Arrangements and Macroeconomics."](#) *IRRA Proceedings*, 39th Annual Meeting, 1987.

["Steady State Unemployment Under Profit Sharing."](#) *The Economic Journal*, 97(385), 86-105, March 1987.

["The Case for Profit Sharing"](#), London: Employment Institute, 1986.

["Macroeconomic Implications of Profit Sharing."](#) in S. Fischer (ed.), *NBER Macroeconomics Annual*, 1986.

["The Share Economy Symposium: A Reply."](#) *Journal of Comparative Economics*, 10(4), 469-473, December 1986.

["Increasing Returns and the Foundations of Unemployment Theory: An Explanation."](#) *Journal of Post Keynesian Economics*, 7(3), 403-409, Spring 1985.

["Profit Sharing as Macroeconomic Policy."](#) *The American Economic Review*, 75(2), 41-45, May 1985.

["The Simple Macroeconomics of Profit Sharing."](#) *American Economic Review*, December 1985; reprinted in W. Beckerman (ed.), *Wage Rigidity and Unemployment*; (translated into Russian and Chinese).

["The Share Economy"](#), *Harvard University Press, 1984; (translated into seven languages).*

["Contestable Markets: An Uprising in the Theory of Industry Structure: Comment."](#) *The American Economic Review*, 73(3), 486-487, June 1983.

["On the Meaning of Comparative Factor Productivity."](#) in P. Desai (ed.), *Marxism, Central Planning, and the Soviet Economy*, M.I.T. Press, 1983.

["Some Macroeconomic Implications of Alternative Compensation Systems."](#) *The Economic Journal*, 93(372), 763-783, December 1983.

["Industrial Production."](#) in *The Soviet Economy to the Year 2000* in Bergson and Levine (eds.), Blackwell Ltd., 1983.

(with Patricia Reagan) ["Asymmetries in Price and Quantity Adjustments by the Competitive Industry."](#) *Journal of Economic Theory*, 27(2), 410-420, August 1982.

["Increasing Returns and the Foundations of Unemployment Theory."](#) *The Economic Journal*, 92(368), 787-804, December 1982.

(with Kevin Roberts) ["Funding Criteria for Research, Development, and Exploration Projects."](#) *Econometrica*, 49(5), 1261-1288, September 1981.

["Sequential R&D Strategy for Synfuels."](#) *Bell Journal of Economics*, 12(2), 574-590, Autumn 1981.



[“Efficient Incentive Contracts.”](#) *Quarterly Journal of Economics*, 94(4), 719-730, June 1980.

[“The ‘Ratchet Principle’ and Performance Incentives.”](#) *Bell Journal of Economics*, 11(1), 302-308, Spring 1980.

[“Optimal Search for the Best Alternative.”](#) *Econometrica*, 47(3), 641-654, May 1979.

[“Technology Transfer to the USSR: An Econometric Analysis.”](#) *Journal of Comparative Economics*, 3(2), 167-177, June 1979.

(with Michael Manove) [“Aggregation for Material Balances.”](#) *Journal of Comparative Economics*, 2(1), 1-11, March 1978.

[“Optimal Revenue Functions for Economic Regulation.”](#) *The American Economic Review*, 68(4), 683-691, September 1978.

(with A. Michael Spence) [“Regulatory Strategies for Pollution Control.”](#) in A.N. Friedlaender (ed.), *Approaches to Controlling Air Pollution*, M.I.T. Press, 1978.

[“Is the Price System or Rationing More Efficient in Getting a Commodity to Those Who Need it Most?”](#) *Bell Journal of Economics*, 8(2), 517-524, Fall 1977.

[“The New Soviet Incentive Model.”](#) *Bell Journal of Economics*, 7(1), 251-257, Spring 1976.

[“On the Welfare Significance of National Product in a Dynamic Economy.”](#) *Quarterly Journal of Economics*, February 1976.

(with Jacques Cremer) [“OPEC and Monopoly Price of World Oil.”](#) *European Economic Review*, 8(2), 155-164, August 1976.

[“The Optimal Development of Resource Pools.”](#) *Journal of Economic Theory*, 12(3), 351-364, June 1976.

(with Jon S. Cohen) [“A Marxian Model of Enclosures.”](#) *Journal of Development Economics*, 1(4), 287-336, March 1975.

[“Free Access vs. Private Ownership as Alternative Systems for Managing Common Property.”](#) *Journal of Economic Theory*, June 1974.

[“A Mathematical Model of Enclosures.”](#) in J. Los and M.W. Los (eds.), *Mathematical Models in Economics*, North Holland, 1974.

[“Prices vs. Quantities.”](#) *Review of Economic Studies*, 41(4), 477-491, October 1974.

[“Duality Theory of Convex Programming for Infinite Horizon Economic Models.”](#) *Management Science*, March 1972.

(with R.E. Davis and D.E. Kendrick) [“A Branch and Bound Algorithm for Zero-One Mixed Integer Programming Problems.”](#) *Operations Research*, 19(4), 1036-1044, July-August 1971.

[“Material Balances under Uncertainty.”](#) *Quarterly Journal of Economics*, 85(2), 262-282, May 1971.

(with A.A. Petrov) [“O Vozmozhnoi Zadachi Planirovaniya Narodnogo Khoziastva”](#) (On a Possible Formulation for Planning the National Economy), *Isledovaniye Operatsii*, 1971.

(with A.C. Schmidt) [“Printsip Maximuma dlya Ekonomicheskikh Protsyosov na Beskonechnom Intervale Vremeni”](#) (The Maximum Principle for Economic Processes on an Infinite Interval of Time), *Kibernetika*, September/October 1971.

[“Shiftable vs. Non-Shiftable Capital: A Synthesis.”](#) *Econometrica*, 39(3), May 1971.

[“Iterative Multi-Level Planning with Production Targets.”](#) *Econometrica*, 38(1), 50-65, January 1970.

[“Optimal Growth with Economies of Scale in the Creation of Overhead Capital.”](#) *Review of Economic Studies*, 37(4), 555-570. October 1970.

[“Soviet Postwar Economic Growth and Capital Labor Substitution.”](#) *The American Economic Review*, 60(4), 676-692, September 1970.

[“A Model of the Demand for Money by Firms: Comment.”](#) *Quarterly Journal of Economics*, 82(1), 161-164, February 1968.

[“On Choosing an Optimal Technology.”](#) *Management Science*, 13(5), 413-428, January 1967.

[“Utility Analysis and Group Behavior: An Empirical Study.”](#) *Journal of Political Economy*, 73(1), 18-26, February 1965.