

FRANK R. LICHTENBERG, Ph.D.

**Curriculum Vitae
January 2012**

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Graduate School of Business
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91 Greenacres Avenue
Scarsdale, NY 10583

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(914) 882-7143

Date of birth: 11/22/51

Conversant in French.

<http://www-1.gsb.columbia.edu/faculty/flichtenberg/index.html>

<http://econpapers.repec.org/RAS/pli76.htm>

http://www.nber.org/cgi-bin/author_papers.pl?author=frank_lichtenberg

<http://ssrn.com/author=22468>

CURRENT POSITIONS

Courtney C. Brown Professor of Business, Columbia University Graduate School of Business

Research Associate, National Bureau of Economic Research, Productivity and Health Care Programs

Research Fellow, CESifo (Center for Economic Studies/Ifo Institute for Economic Research), Munich, Germany

Visiting Professor, Center for Strategic Economic Studies, Victoria University, Melbourne, Australia, 2006-present

Associate Editor, *Economics*

Editorial Board member, *Journal of Evolutionary Economics*

Editorial Board member, *Defence and Peace Economics*

Member, Conference on Research in Income and Wealth

Affiliate, Analysis Group

AWARDS

Winner of an Outstanding Author Contribution Award at the Literati Network Awards for Excellence 2011 for the publication *The Effect of Drug Vintage on Survival: Micro Evidence from Puerto Rico's Medicaid Program*.

Winner of Research!America's 2010 Garfield Economic Impact Award for the paper, *The effect of new cancer drug approvals on the life expectancy of American cancer patients, 1978-2004*.

Winner of the 2003 Milken Institute Award for Distinguished Economic Research for the paper, *Pharmaceutical Knowledge-Capital Accumulation and Longevity*.

Winner of the 1998 Schumpeter Prize for the paper, *Pharmaceutical Innovation as a Process of Creative Destruction*.

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Margaret Chandler Memorial Award for Commitment to Excellence ("Best Teacher Award") by the Columbia Business School Executive MBA Class of 1994-II.

EDUCATION

Ph.D. Economics, University of Pennsylvania, 1982

Dissertation: Training, Tenure, and Productivity

Graduate Honors received: University Fellow, Teaching Fellow, Graduate Group Fellow

M.A. Economics, University of Pennsylvania, 1976

B.A. with Honors, History, University of Chicago, 1973

National Merit Scholar Finalist, 1969

attended University of Warwick (England), Fall 1972

PREVIOUS TEACHING AND RESEARCH POSITIONS

Columbia–Ecole Polytechnique Alliance Visiting Professor at the Ecole Polytechnique, Paris, France (Spring 2011)

Member, Advisory Committee, Division of Information Management, New York Academy of Medicine

Visiting Scholar, Federal Trade Commission, Fall 1997

Visiting Scholar, Center for Economic Studies, University of Munich, July 1997

Columbia University Graduate School of Business

Head of Economics Group, 1994-96

Professor, 1992-95

Associate Professor, 1986-92

Assistant Professor, 1983-86

Visiting Scholar, Wissenschaftszentrum Berlin, July 1995

Visiting Scholar, Kiel (Germany) Institute of World Economics, August 1993

National Bureau of Economic Research

Faculty Research Fellow, 1982-86

Research Economist, 1980-82

Jerome Levy Economics Institute at Bard College

Research Fellow, 1989-90

American Statistical Association/National Science Foundation/Census Bureau

Research Fellow, 1986-87

Columbia University, Center for Education and the American Economy

Senior Research Associate, 1985-87

University of Adelaide (Australia)

Visiting Lecturer, 1982

Harvard University

Instructor, 1982

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U.S. Bureau of Labor Statistics, Office of Economic Growth
Dissertation Fellow, 1979-80

Brookings Institution
Research Fellow in Economics, 1978-79

University of Pennsylvania, Wharton School
Instructor, 1978

U.S. Congressional Budget Office, Budget Analysis Division
Intern, 1977

U.S. Department of Justice, Antitrust Division
Intern, 1976

Henry Dreyfuss Associates (Industrial Designers), Production Manager, 1973-75

PUBLICATIONS

Book

Corporate Takeovers and Productivity (Cambridge: MIT Press, 1992).

Articles

“The effect of pharmaceutical innovation on the functional limitations of elderly Americans: evidence from the 2004 National Nursing Home Survey,” *Advances in Health Economics and Health Services Research*, forthcoming.

“Is home health care a substitute for hospital care?,” *Home Health Care Services Quarterly*, forthcoming.

“Does competition stimulate drug utilization? The impact of changes in market structure on US drug prices, marketing and utilization,” with Gautier Duflos, *International Review of Law and Economics*, <http://www.sciencedirect.com/science/article/pii/S0144818811000585>.

“The contribution of pharmaceutical innovation to longevity growth in Germany and France, 2001-2007,” *PharmacoEconomics*, forthcoming.

“The impact of new (orphan) drug approvals on premature mortality from rare diseases in the U.S. and France, 1999-2007, *European Journal of Health Economics*, <http://www.ncbi.nlm.nih.gov/pubmed/21953319>.

“Has pharmaceutical innovation reduced Social Security Disability growth?,” *International Journal of the Economics of Business* 18 (2), 2011.

“Pharmaceutical Companies’ Variation of Drug Prices Within and Among Countries Can Improve Social Well Being Over the Long Term,” *Health Affairs* 30 (8), August 2011; shorter version also published in *The World Financial Review*, Sept/Oct. 2011, <http://www.worldfinancialreview.com/?p=791>.

“What are the Respective Roles of the Public and Private Sectors in Pharmaceutical Innovation?,” with Bhaven Sampat, *Health Affairs* 30(2):332-9, Feb. 2011.

“The quality of medical care, behavioral risk factors, and longevity growth,” *International Journal of Health Care Finance and Economics* 11(1), March 2011, 1-34.

"Spurious correlation in estimation of the health production function: A note," *Economics Bulletin* 30 (3), pp. 2505-2514, September 28, 2010, with Sule Akkoyunlu, Boriss Siliverstovs and Peter Zweifel,
<http://www.accessecon.com/Pubs/EB/2010/Volume30/EB-10-V30-I3-P230.pdf>

"Pharmaceutical Price Discrimination and Social Welfare," *Capitalism and Society* 5 (1), Article 2.
<http://www.bepress.com/cas/vol5/iss1/art2>

"Are Increasing 5-Year Survival Rates Evidence of Success Against Cancer? A Reexamination Using Data from the U.S. and Australia," *Forum for Health Economics & Policy* 13 (2) (Health Economics), Article 11.
<http://www.bepress.com/fhep/13/2/11>

"The Effect of Patent Expiration on U.S. Drug Prices, Marketing, and Utilization," with Gautier Duflos, *Concurrences (Review of Competition Laws)*, forthcoming,
http://www.concurrences.com/toc_revue.php3?id_rubrique=1052&lang=en

"The effect of drug vintage on survival: Micro evidence from Puerto Rico's Medicaid program," in M. Grossman, B. Lindgren, R. Kaestner, and Kristian (eds.), *Pharmaceutical Markets and Insurance Worldwide (Advances in Health Economics and Health Services Research, Volume 22)*, Emerald Group Publishing Limited, pp. 273-292.

"Pharmaceutical Innovation and Mortality in the United States, 1960-2000. A commentary on Schnittker and Karandinos," *Social Science & Medicine* 70 (2010), pp. 969-971.

"Life-expectancy gains from pharmaceutical drugs: a critical appraisal of the literature," *Expert Review of Pharmacoeconomics & Outcomes Research* 9 (6), 499-504.

"The impact of drug vintage on patient survival: a patient-level analysis using Quebec's provincial health plan data," with Paul Grootendorst, Marc Van Audenrode, Dominick Latremouille-Viau, and Patrick Lefebvre, *Value in Health* 12 (6), 847-856.

"International differences in cancer survival rates: the role of new drug launches," *International Journal of Healthcare Technology and Management* 10 (3), 2009, 138-55.

"Does Misery Love Company? Evidence from pharmaceutical markets before and after the Orphan Drug Act," with Joel Waldfogel, 15 *Michigan Telecommunications and Technology Law Review*, 335 (2009), available at
<http://www.mttlr.org/volfifteen/lichtenberg&waldfogel.pdf>

"The effect of new cancer drug approvals on the life expectancy of American cancer patients, 1978-2004," *Economics of Innovation and New Technology* 18 (5), 2009, 407-28.

"Home, or nursing home? The effect of medical innovation on the demand for long-term care," in J. Costa i Font, A. McGuire and C. Courbage (eds), *The Economics of New Health Technologies: Incentives, Organisation and Financing*, Oxford University Press (2009).

"Have newer cardiovascular drugs reduced hospitalization? Evidence from longitudinal country-level data on 20 OECD countries, 1995-2003," *Health Economics* 18 (5), 2009, 519-534.

"Pharmaceutical innovation and the longevity of Australians: a first look," with Gautier Duflos, *Advances in Health Economics and Health Services Research* 19, 2008, pp 95-117.

"Pharmaceutical Innovation and U.S. Cancer Survival, 1992-2003: Evidence from Linked SEER-MEDSTAT Data," *Forum for Health Economics & Policy*: Vol. 10: Iss. 1 (Frontiers in Health Policy Research), Article 1.
<http://www.bepress.com/fhep/10/1/1>

“The Effect Of Education On Medical Technology Adoption: Are The More Educated More Likely To Use New Drugs?,” with Adriana Lleras-Muney, *Annales d’Economie et de Statistique*, forthcoming.

“The impact of Medicare Part D on prescription drug use by the elderly: evidence from a large retail pharmacy chain,” with Shawn Sun, *Health Affairs* 26(6), November/December 2007, 1735-44.

“Importation and innovation,” *Economics of Innovation and New Technology*, 2007, Vol. 16(6), September, pp. 403–417

“Benefits and Costs of Newer Drugs: An Update,” *Managerial and Decision Economics* 28: 485–490 (2007).

“Pharmaceutical-embodied technical progress, longevity, and quality of life: drugs as ‘equipment for your health,’” with Suchin Virabhak, *Managerial and Decision Economics* 28: 371–392 (2007)

“The Effect of Drug Vintage on Mortality: Economic Effect of New Drugs,” with Kee Taig Jung and Jeong Yoon Kim, *Korean Journal of Health Policy and Administration* 16(4), December 2006, 147-68.

“Effects of new drugs on overall health spending: Frank Lichtenberg responds,” *Health Affairs* 26(3), May-June, 887-90.

“The effect of using newer drugs on admissions of elderly Americans to hospitals and nursing homes: state-level evidence from 1997-2003,” *Pharmacoeconomics* 24 Suppl 3, 2006, 5-25.

“The Impact of New Drugs on U.S. Longevity and Medical Expenditure, 1990-2003,” *American Economic Review* 97 (2), May 2007, 438-443.

“Ensuring the future supply of vaccines: Is a National Vaccine Authority the answer?,” in *Pharmaceutical Innovation: Incentives, Competition, and Cost-Benefit Analysis in International Perspective*, ed. by Chee-Ruey Hsieh and Frank Sloan (Cambridge University Press, 2007), 127-52.

“The impact of increased utilization of HIV drugs on longevity and medical expenditure: an assessment based on aggregate U.S. time-series data,” *Expert Review of Pharmacoeconomics and Outcomes Research*, Volume 6, Number 4, August 2006, 425-436.

“Did CMS’ Functional Equivalence Decision Result in Equitable Payments?,” *Journal of Pharmaceutical Finance, Economics & Policy* 15(1), 2006, 7-20.

“Has using newer drugs reduced admissions to hospitals and nursing homes?,” *Swiss Journal of Economics and Statistics* 142, 2006, pp. 69-75.

“The Benefits to Society of New Drugs: A Survey of the Econometric Evidence,” in *Engaging the New World: Responses to the Knowledge Economy*, edited by Bhajan S. Grewal and Margarita Kumnick, Melbourne University Press, Melbourne, 2006.

“Pharmaceutical Innovation as a Process of Creative Destruction,” in *Knowledge Accumulation and Industry Evolution: The Case of Pharma-Biotech*, ed. by Mariana Mazzucato and Giovanni Dosi (Cambridge University Press, 2006), pp. 21-72.

“Pharmaceutical innovation and the burden of disease in developing countries,” *Journal of Medicine and Philosophy* 30(6), December 2005.

“Pharmaceutical Knowledge-Capital Accumulation and Longevity,” in *Measuring Capital in the New Economy*, ed. by Carol Corrado, John Haltiwanger, and Dan Sichel, pp. 237-269 (University of Chicago Press, 2005).

"Availability of new drugs and Americans' ability to work," *Journal of Occupational and Environmental Medicine* 47 (4), April 2005, 373-380.

"The Effect of Access Restrictions on the Vintage of Drugs Used by Medicaid Enrollees," *American Journal of Managed Care* 11, Special Issue, 2005, SP7-SP13.

"The impact of new drug launches on longevity: evidence from longitudinal disease-level data from 52 countries, 1982-2001," *International Journal of Health Care Finance and Economics* 5, 2005, pp. 47-73.

"Sources of U.S. Longevity Increase, 1960-2001," *Quarterly Review of Economics and Finance* 44(3), pp. 369-389 (July 2004).

"Public policy and innovation in the U.S. pharmaceutical industry," in *Public Policy and the Economics of Entrepreneurship*, ed. by Douglas Holtz-Eakin and Harvey S. Rosen (MIT Press, 2004), pp. 83-113.

"The Effect of New Drugs on HIV Mortality in the U.S., 1987-1998," *Economics and Human Biology* 1 (2003) 259-266.

"Pharmaceutical Innovation, Mortality Reduction, and Economic Growth," in *Measuring the Gains from Medical Research: An Economic Approach*, ed. by Kevin M. Murphy and Robert H. Topel (Chicago: University of Chicago Press, 2003), pp. 74-109.

"The Dual Effects of Intellectual Property Regulations: Within- and Between-Patent Competition in The US Pharmaceuticals Industry," with Tomas Philipson, *Journal of Law & Economics* 45, pp. 643-672, 2002.

"The Effects of Medicare on Health Care Utilization and Outcomes," *Frontiers in Health Policy Research*, Vol. 5, ed. by Alan Garber (MIT Press, 2002), <http://www.nber.org/chapters/c9857>

"Are the Benefits of Newer Drugs Worth Their Cost? Evidence from the 1996 MEPS," *Health Affairs* 20(5), September/October 2001, 241-51.

"Does foreign direct investment transfer technology across borders?," with Bruno van Pottelsberghe de la Potterie, *The Review of Economics and Statistics*, Aug 2001; Vol. 83, Iss. 3; pp. 490-7.

"The Allocation of Publicly Funded Biomedical Research," in *Medical Care Output and Productivity*, Studies in Income and Wealth Volume 62, ed. by Ernst Berndt and David Cutler (University of Chicago Press, 2001), 565-89.

"The Effect of Pharmaceutical Utilisation and Innovation on Hospitalisation and Mortality," in *Productivity, Technology, and Economic Growth*, ed. by B. van Ark, S. K. Kuipers and G. Kuper (Kluwer Academic Publishers, 2000).

"The European Strategic Programme for Research in Information Technologies (ESPRIT): An Ex-Post Analysis," in *The Political Economy of Industrial Policy*, ed. by D. Neven and Lars-Hendrik Roller (Wissenschaftszentrum Berlin and Edition Sigma).

"Managerial Ownership and Firm Performance: A Re-examination Using Productivity Measurement," with Darius Palia, *Journal of Corporate Finance: Contracting, Governance and Organization* 5(4), December 1999, 323-39.

"Information Technology and Its Impact on Productivity: Firm-level Evidence from Government and Private Data Sources, 1977-1993," with Bill Lehr, *Canadian Journal of Economics* 32(2), April 1999, 335-62.

"Computer Use and Productivity Growth in Federal Government Agencies, 1987-92," with Bill Lehr, *Journal of Industrial Economics* 46(2), June 1998, 257-79.

"International R&D Spillovers: A Comment," with Bruno van Pottelsberghe de la Potterie, *European Economic Review* 42(8), September 1998, 1483-91.

"The Impact and Organization of Publicly-Funded Research and Development in the European Community," with Maryann Feldman, *Annales d'Economie et Statistique* 0(49-50), (in English), Jan.-June 1998, 199-222.

"Technology Investment is Driving Economic Growth," in *The Rising Tide*, ed. by Jerry Jasinowski (New York: Wiley, 1998), 163-9.

"Commentary: Shoring up Government Support," in *The Future of Biomedical Research*, ed. by Claude Barfield and Bruce Smith (Washington: American Enterprise Institute and Brookings Institution, 1997), 67-72.

"Do (More and Better) Drugs Keep People Out of Hospitals?," *American Economic Review* 86, May, 1996, 384-8.

"Labour Market Institutions, Liquidity Constraints, and Macroeconomic Stability," *Journal of Economic Behavior and Organization* 28 (1995), 145-54.

"The Output Contributions of Computer Equipment and Personnel: A Firm-Level Analysis," *Economics of Innovation and New Technology* 3 (1995), 201-17.

"The Economics of Defense R&D," in *The Handbook of Defense Economics*, Volume 1, ed. by K. Hartley and T. Sandler. Handbooks in Economics, vol. 12. (Amsterdam, New York and Oxford: Elsevier, 1995), 431-57.

"Ownership Structure and Corporate Performance in Japan," with George Pushner, *Japan and the World Economy* 6 (1994), 239-61.

"Testing the Convergence Hypothesis," *Review of Economics and Statistics* 76(3), August 1994, 576-9.

"An Industry-Level Analysis of Import Relief Petitions Filed by U.S. Manufacturers, 1958-1985," with Hong Tan, in *Troubled Industries in the United States and Japan*, ed. by Hong Tan and Haruo Shimada (New York: St. Martin's Press, 1994), 161-88.

"Have International Differences in Educational Attainment Levels Narrowed?," in *Convergence of Productivity: Cross-National Studies and Historical Evidence*, ed. by W. Baumol, R. Nelson, and E. Wolff (New York: Oxford University Press, 1994), 225-42.

"R&D Investment and International Productivity Differences," in *Economic Growth in the World Economy*, ed. by Horst Siebert (Tubingen: J. C. B. Mohr, 1993), 89-110.

"Industrial De-Diversification and Its Consequences for Productivity," *Journal of Economic Behavior and Organization* 18 (1992), 427-38.

"A Perspective on Accounting for Defense Contracts," *The Accounting Review* 67 (4), 742-53, October 1992.

"Asset Stripping," in *The New Palgrave Dictionary of Money and Finance*, J. Eatwell, M. Milgate, and P. Newman, eds. (London: Macmillan, 1992).

"The Managerial Response to Regulation of Financial Reporting for Segments of a Business Enterprise," *Journal of Regulatory Economics* 3 (1991), 241-9.

"The Age of Technology and Its Impact on Employee Wages," with Ann Bartel, *Economics of Innovation and New Technology* 1 (1991), 215-31.

"The Impact of R&D Investment on Productivity: New Evidence Using Linked R&D-LRD Data," with Donald Siegel, *Economic Inquiry* 29 (1991), April, 203-28.

"The Effect of Leveraged Buyouts on Productivity and Related Aspects of Firm Behavior," with Donald Siegel, *Journal of Financial Economics* 26 (1990), 165-94.

"The Effect of Ownership Changes on the Employment and Wages of Central-Office and Other Personnel," with Donald Siegel, *Journal of Law and Economics* 33 (1990), October, 383-408.

"U.S. Government Subsidies to Private Military R&D: The Defense Department's Independent R&D Policy," *Defense Economics* 1 (1990), 149-58.

"Aggregation of Variables in Least-Squares Regression," *American Statistician* 44 (1990), 169-71.

"Issues in Measuring Industrial R&D," *Research Policy* 19 (1990), 157-63.

"How Elastic is the Government's Demand for Weapons?," *Journal of Public Economics* 40 (1989), 57-78.

"The Effect of Control Changes on the Productivity of U.S. Manufacturing Plants," with Donald Siegel, *Journal of Applied Corporate Finance*, August 1989, 60-7.

"Contributions to Federal Election Campaigns by Government Contractors," *Journal of Industrial Economics* 38, September 1989, 31-48.

"R&D Project Data and Theories of R&D Investment," *Journal of Economic Dynamics and Control* 13, 1989, 271-82.

"Errors of Measurement in Output Deflators," with Zvi Griliches, *Journal of Business and Economic Statistics* 7, Jan. 1989, 1-9.

"The Impact of the Strategic Defense Initiative on U.S. Civilian R&D Investment and International Competitiveness," *Social Studies of Science* 19(2), 1989; also published (in French) in J.J. Salomon (ed.), *Science, Guerre et Paix* (Paris: Economica, 1989), 137-56.

"Managerial Economics," in *The Portable MBA*, Mary Anne Devanna and Eliza G.C. Collins, eds. (New York: Wiley, 1989).

"Estimation of the Internal Adjustment Costs Model Using Longitudinal Establishment Data," *Review of Economics and Statistics* 70(3), August 1988, 421-30.

"The Private R&D Investment Response to Federal Design and Technical Competitions," *American Economic Review* 78(3), June 1988, 550-9.

"Productivity Improvements from Changes in Ownership," *Mergers and Acquisitions* 23(2), Sept./Oct. 1988, 48-50.

"Assessing the Impact of Federal Industrial R&D Expenditure on Private R&D Activity in the U.S.," in *The Relation Between Defence and Civil Technologies*, Philip Gummett and Judith Reppy, eds. (Dordrecht: Kluwer Academic Publishers, 1988), 68-87.

"Productivity and Changes in Ownership of Manufacturing Plants," with Donald Siegel, *Brookings Papers on Economic Activity*, 1987:3, 643-73.

"The Effect of Government Funding on Private Industrial Research and Development: A Re-Assessment," *Journal of Industrial Economics* 36(1), Sept. 1987.

"Changing Market Opportunities and the Structure of R&D Investment: The Case of Energy," *Energy Economics* 9(3), July 1987, 154-8.

"The Comparative Advantage of Educated Workers in Implementing New Technology," with Ann Bartel, *Review of Economics and Statistics* 69(1), Feb. 1987, 1-11.

"The Skill Distribution and Competitive Trade Advantage of High-Technology Industries," with Ann Bartel, in *Advances in Industrial and Labor Relations*, Vol. 4, D. Lewin, D. Lipsky, and D. Sockell, eds. (JAI Press, 1987).

"The Duration and Intensity of Investment in Independent Research and Development Projects," *Journal of Economic and Social Measurement* 14, 1986, 207-18.

"Energy Prices and Induced Innovation," *Research Policy* 15, 1986, 67-75.

"Interindustry Technology Flows and Productivity Growth: A Re-Examination," with Zvi Griliches, *Review of Economics and Statistics* 66(2), May 1984.

"The Relationship Between Federal Contract R&D and Company R&D," *American Economic Association Papers and Proceedings* 74(2), May 1984.

"R&D and Productivity at the Industry Level: Is There Still a Relationship?," with Zvi Griliches, in *R&D, Patents, and Productivity*, Zvi Griliches, ed. (Chicago: Univ. of Chicago Press, 1984), pp. 465-496.

Other Publications

"Despite steep costs, payments for new cancer drugs make economic sense," *Nature Medicine*, forthcoming.

"Do New Drugs Save Lives?" (Letter to the Editor), *Journal of General Internal Medicine*, December 2009.

Comment on "M&As in the USA: Lessons from the last 100 years," by John Matsusaka, in *Institutional and Policy Reforms to Enhance Corporate Efficiency in Korea*, ed. by Lee-Jay Cho, Somi Seong, and Sang-Hyop Lee (Seoul: Korea Development Institute, 2007), pp. 231-235.

"Yes, New Drugs Save Lives," *Washington Post*, July 11, 2007; A15.

"Clinical Laboratory Innovation Means Better Health, Longer Lives," *Laboratory Medicine* 36 (8), p. 452+, August 2005.

"Cover These Treatments ," *Washington Post* (op-ed article), August 20, 2004, page A19 (also appeared in *Houston Chronicle*).

"Longer Living Through Chemistry," *The Milken Institute Review* 6 (1), First Quarter 2004, 16-26.

"The Value of New Drugs," *The Milken Institute Review* 6 (1), Fourth Quarter 2003, 17-25.

"The Economic and Human Impact of New Drugs," *Journal of Clinical Psychiatry* 64, Supplement 17, 2003, 15-18.

"The Benefits to Society of New Drugs: A Survey of the Econometric Evidence," in *Science & Cents: Exploring the Economics of Biotechnology*, ed. By John Duca and Mine Yucel (Dallas: Federal Reserve Bank of Dallas, 2003), 43-59.

"Probing the Link Between Gross Profitability and R&D Spending," *Health Affairs* 20(5), September/October 2001, 221-2.

Comment on Papers by Frank and Salkever and by Skinner and Wennberg, in *The Changing Hospital Industry: Comparing Not-for-Profit and For-Profit Institutions*, edited by David M. Cutler, The University of Chicago Press, 2000

Comment on Paper by Barro and Cutler, in *Mergers and Productivity*, edited by Steven N. Kaplan, The University of Chicago Press, 2000

Comment on Paper by McGuckin, Nguyen, and Reznick, in *Labor Statistics Measurement Issues* edited by John Haltiwanger, Marilyn E. Manser, and Robert Topel, The University of Chicago Press, 1998.

"Do (more and better) medicines keep people out of hospitals?" (Pfizer Forum), *The Economist*, October 26, 1996, p. 63.

Review of *The Performance of Companies*, by Stephen Nickell (Oxford, U.K.: Blackwell, 1995), in *The Journal of Economics*.

Comment on "Efficiency in manufacturing and the need for global competition," by Martin Baily and Neil Gersbach, *Brookings Papers on Economic Activity: Microeconomics* 1995.

"Rejoinder to Comment by Maarten Vendrik," *Journal of Economic Behavior and Organization* 28, Dec. 1995. p. 455.

Comment on "Productivity levels in Germany, Japan, and the United States: Differences and causes," by Bart van Ark and Dirk Pilat, *Brookings Papers on Economic Activity: Microeconomics* 1993.

"Another Way to Measure IT's Productivity Contribution," *The Brookings Review* 12, Fall 1994, 2.

Review of *International High-Technology Competition*, by F. M. Scherer, in *The Journal of Economic Literature* XXXI (4), Dec. 1993, 2015-7.

Comment on "Decade of Debt: Lessons from LBOs in the 1980s," by William Long and David Ravenscraft, in *The Deal Decade: What Takeovers and Leveraged Buyouts Mean for Corporate Governance*, edited by Margaret Blair (Washington: Brookings, 1993), 230-234.

"In a Downturn, Cut Profits Before Jobs" *New York Times* (Sunday Business Section), Feb. 16, 1992, Section 3, p. 13.

"Want More Productivity? Kill That Conglomerate," *Wall Street Journal* (editorial page article), Jan. 16, 1990.

"The Issues in Restructuring," *Institutional Investor*, June 1989.

"In Takeover Wars, Everyone Wins," *New York Times* (Business Forum article), June 18, 1989.

"Takeovers Slash Corporate Overhead," *Wall Street Journal* (editorial page article), Feb. 7, 1989.

"What Makes Plant Productivity Grow?," *Wall Street Journal* (editorial page article), Dec. 24, 1987; also published (in Italian) in *Il Sole 24 Ore* (Milan), Jan. 20, 1988.

Review of *The Burden of Government*, by Edwin S. Mills (Stanford: Hoover Institution Press, 1986) in *Journal of Comparative Economics* 12(2), June 1988, 304-5.

"Military R&D Depletes Economic Might," *Wall Street Journal* (editorial page article), Aug. 21, 1986; reprinted in *Impact*, newsletter of the Institute of Electrical and Electronic Engineers 11(1), May 1987.

CONGRESSIONAL TESTIMONY

Testified before the House Committee on Veterans' Affairs on "Access to new drugs in the Veterans Health Administration," Sept. 22, 2009,
<http://veterans.house.gov/hearings/Testimony.aspx?TID=51908&Newsid=470&Name=%20Frank%20R.%20Lichte%20nberg.%20Ph.D.>

Testified before the House Committee on Science, Space, and Technology in hearings on "Corporate Restructuring and Its Effects on R&D," July 13, 1989.

SOURCES OF RESEARCH GRANTS, FELLOWSHIPS, AND CONTRACTS

American Assembly of Collegiate Schools of Business	Merck and Co.
American Enterprise Institute	National Institute of Education
American Statistical Association	National Institutes of Health
Federal Trade Commission	National Pharmaceutical Council
French-American Foundation	National Science Foundation
Fulbright Commission	Pfizer, Inc.
German Academic Exchange Service	RAND Corporation
German Marshall Fund of the U.S.	Research Triangle Institute
Jerome Levy Economics Institute	Securities Industry Association
MacArthur Foundation	Alfred P. Sloan Foundation
Siemens	U.S. Bureau of the Census

CONSULTING AND REVIEWING ACTIVITIES

Reviewer for:

Administrative Science Quarterly	Journal of Industrial Economics
American Economic Review	Journal of Labor Economics
Commonwealth Fund	Journal of Peace Research
Econometrica	Journal of Political Economy
Economic Letters	Journal of Policy Analysis and Management
Economica	Journal of Productivity Analysis
Economics of Innovation and New Technology	Journal of Public Economics
European Economic Review	Journal of the American Medical Association
Financial Management	Medical Care
Health Affairs	MIT Press
Health Economics	National Science Foundation
Industrial Relations	Oxford University Press
International Journal of Epidemiology	Population Studies
International Journal of Industrial Organization	Prentice Hall
Journal of Comparative Economics	Princeton University Press
Journal of Development Economics	Quarterly Journal of Economics
Journal of Economic Behavior and Organization	Rand Journal of Economics
Journal of Econometrics	Research Policy

C.V. of Frank R. Lichtenberg

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Journal of Economic Literature
Journal of Health Economics
Journal of Health Politics, Policy and Law

Review of Income and Wealth
Science
University of Chicago Press

Consultant to:

Amer. Fed. of State, County, and Municipal Employees
American Hospital Association
American Society for Clinical Oncology
Barr Laboratories
Community Preservation Corporation
Consortium on Productivity in the Schools
Economic Policy Institute/Union of Concerned Scientists
Gellman Research Associates
Institute of Medicine
Internal Revenue Service
National Institute of Standards & Technology
National Science Foundation
New York Attorney General

New York City Water Board
New York State Dept. of Econ. Devel.
OECD
Pennie and Edmonds
RAND Corporation
Research Triangle Institute
Skadden, Arps, Slate, Meagher, & Flom
Touche, Ross, and Co.
U.S. Bureau of the Census
Wachtell, Lipton, Rosen & Katz
Weil, Gotshal, & Manges
World Health Organization

Outside activities, January 2006-December 2011

Consultant: Amgen, Deloitte Consulting LLP, Edelman, Korean Research Based Pharmaceutical Industry Association, McKinsey, Mylan Laboratories, OTR Media Group, Roche, Sanofi Aventis, TAP pharmaceuticals

Expert witness: Food Marketing Consultants, Global Pharmaceuticals, Internal Revenue Service, New York City Law Department, New York State Office of Attorney General, anonymous generic pharmaceutical company

Speaker: Abbott Labs, AdvaMed, Alliance for Aging Research, AMCP Horizons, LLC, Associação Portuguesa da Indústria Farmacêutica, Association of Research-based Pharmaceutical Firms (Turkey), Biogen Idec, Canada's Research-Based Pharmaceutical Companies (Rx&D), Canadian Medical Association, Danish Association of the Pharmaceutical Industry, Gerson Lehrman Group, InHealth Institute for Health Technology Studies, International Federation of Pharmaceutical Manufacturers and Associations, Interpharma, Irish Pharmaceutical Healthcare Association Ltd, Manhattan Institute for Policy Research, Merck & Co., Inc., Merck Frosst, Montreal Economic Institute, National Institutes of Health, Ontario Ministry of Health, Pfizer, pharma.be, Pharmacy Society of Wisconsin, Roche, Rutgers University, Science Union et Cie, St. Vincent's Hospital, Stockholm Network, Swiss Pharma importers, Watson Wyatt Worldwide

Researcher:

Organization	Research area
American Association of Nurse Anesthetists	The effect of socioeconomic and health status on the provision and cost of anesthesia services
Analysis Group	Analysis of IMF Recommendations to Foreign Governments Faced with Fiscal Crises and Impacts on the Biopharmaceutical Sector
American Enterprise Institute	The impact of new (orphan) drug approvals on premature mortality from rare diseases in the U.S. and France, 1999-2007; The effect of pharmaceutical innovation on longevity: patient-level evidence from the 1996-2005 Medical Expenditure Panel Survey and Linked Mortality Public-use Files
Center for Medicine in the Public Interest	The impact of pharmaceutical innovation on cancer survival: evidence from the SEER-Medicare Linked Database
Home Instead, Inc.	Is home health care a substitute for hospital care?
Laboratory Health Care Coalition	Econometric Estimation of the Value of Clinical Laboratory Innovations
Novartis	The impact of new (orphan) drug approvals on premature mortality from rare diseases in the U.S. and France, 1979-2005; The effect of pharmaceutical innovation on the functional limitations of elderly Americans: evidence from the 2004 National Nursing Home Survey; The effect of pharmaceutical innovation on longevity: patient-level evidence from the 1996-2005 Medical Expenditure Panel Survey and Linked Mortality Public-use Files
National Pharmaceutical Council	Has Medicare Part D improved the health of elderly Americans?
PhRMA	Value of Medicines in the Korean Health Care System
Siemens Medical Solutions	The Quality of Medical Care, Behavioral Risk Factors, and Longevity Growth; Has Medical Innovation Reduced Cancer Mortality?
AdvaMed	The impact of antimicrobial susceptibility testing on the survival and treatment costs of inpatients with infectious diseases
Canada's Research-Based Pharmaceutical Companies (Rx&D)	The impact of drug vintage on patient survival: A Patient-Level Analysis Using Quebec's Provincial Health Plan Data

International Federation of Pharmaceutical Manufacturers and Associations	Have newer cardiovascular drugs reduced hospitalization? Evidence from longitudinal country-level data on 21 OECD countries, 1995-2004
Manhattan Institute for Policy Research	The Quality of Medical Care, Behavioral Risk Factors, and Longevity Growth; Has pharmaceutical innovation reduced Social Security Disability growth?; Does competition stimulate drug utilization? The impact of changes in market structure on US drug prices, marketing and utilization
Merck & Co., Inc.	The contribution of pharmaceutical innovation to longevity growth in Germany and France, 2001-2007
National Institutes of Health	What are the respective roles of the public and private sectors in pharmaceutical innovation?
Pfizer	The impact of new (orphan) drug approvals on premature mortality from rare diseases in the U.S. and France, 1979-2005; The effect of pharmaceutical innovation on longevity: patient-level evidence from the 1996-2005 Medical Expenditure Panel Survey and Linked Mortality Public-use Files
Science Union et Cie	The contribution of pharmaceutical innovation to longevity growth in Germany and France, 2001-2007