

JOHN A. VERNON

Assistant Professor
Health Policy and Management
Gillings School of Global Health
University of North Carolina at Chapel Hill

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PREVIOUS APPOINTMENTS

Assistant Professor, Department of Finance, Graduate School of Business, The University of Connecticut (Storrs), 2003-2008.

Senior Economic Policy Advisor to the Office of the Commissioner, U.S. Food and Drug Administration (2007-2009, on partial leave from University of Connecticut in 2007-2008).

Visiting Assistant Professor, The Wharton School, University of Pennsylvania, Spring 2008.

RESEARCH FOCUS

Primary overarching question: How do various government regulations impact the structure, conduct, and performance of the global pharmaceutical and biotechnology industries?

EDUCATION

Ph.D. The Wharton School, University of Pennsylvania, July 2003
Managerial Science and Health Policy (Advisor: Mark V. Pauly).

Ph.D. The City University of London, May 2001
Economics, Financial Economics (Advisor: Alistair McGuire,
University Distinguished Chair, London School of Economics).

M.A. North Carolina State University, May 1995
Economics, with Honors.

B.A. Duke University, 1992
Economics

RESEARCH AWARDS/HONORS

2005 Best Paper Award, Graduate School of Business, University of Connecticut, *Honorable Mention* for “Drug Prices and R&D Investment Behavior in the Pharmaceutical Industry” (with C. Giaccotto and R. Santerre), published in *The Journal of Law and Economics* (University of Chicago Press).

2006 International Society for Pharmacoeconomics and Outcomes Research, Methodology Research Award, *Article Nomination*, for “Dynamic Optimization and Optimal Control in Pharmacoeconomics (with W. Huguen), published in *Value and Health* (International Society for Pharmacoeconomics and Outcomes Research)

2009 Best Paper Award, Graduate School of Business, University of Connecticut, *Honorable Mention* for “Pharmaceutical R&D Spending and Price Constraint Threats (with J. Golec and S. Hegde), forthcoming in *Journal of Financial and Quantitative Analysis* (Cambridge University Press).

PUBLICATIONS

Vernon, J.A., Golec, J., and DiMasi, J. Drug Development Costs when Financial Risk is Measured Using the Fama-French Three-factor Model. Forthcoming in *Health Economics*.

Golec, J., Hegde, S., and **Vernon, J.A.** Pharmaceutical R&D Spending and Price Constraint Threats. Forthcoming in *Journal of Financial and Quantitative Analysis*.

Vernon, J.A., Bennett, A., and Golec, J. Exploration of Potential Economics of Follow-on Biologics and Implications for Data Exclusivity Periods for Biologics. Forthcoming in *Boston University Journal of Science and Technology Law*.

Golec, J. and **Vernon, J.A.** (2009). Financial Risk of the Biotechnology Industry versus the Pharmaceutical Industry. *Applied Health Economics and Health Policy*. 7(3):155-165.

Vernon, J.A., Golec J., Lutter, R. Nardinelli, C. (2009). An Exploratory Study of FDA New Drug Approval Times, Prescription Drug User Fees, and R&D Spending. *The Quarterly Review of Economics and Finance*. 49(4):1260-1275.

Vernon, J.A., Goldberg, R. and Golec J. (2009). Cost-effectiveness Thresholds: Economic Signals to Firms and Implications for R&D Investment and Innovation. *PharmacoEconomics*. 27(10): 797-806.

Trujillo A., **Vernon, J.A.**, Wong, R.L., and Angeles, G. (2009). Race and Health Disparities among Seniors in Rural Areas in Brazil (Lead Article). *Journal of Health and Aging*. 21(1): 3-37.

Vernon, J.A., Payette, M., and Chatterjee (2009). Social Welfare and Adolescent Vaccination Programs in the United States: The Economic Opportunities for a Systematic Expansion. *Social Work in Public Health*. 24(5): 414-445.

Vernon, J.A. (2009) Considering the Economic Principles of Pharmaceutical R&D. *Expert Opinion on Drug Discovery*. 4(1): 21-22.

Cook, J., Hunter, G., **Vernon, J.A.** (2009). Corresponding Author. The Future Costs, Risks, and Rewards of Drug Development: The Economics of Pharmacogenomics. *PharmacoEconomics*. 27(5): 335-369.

Jonas, D., **Vernon, J.A.**, and McLeod, H. (2009). Potential Cost Savings of Fewer Visits and Less Time for Patients Should be Included in Analysis. *Annals of Internal Medicine*. Letter/Note February 17, 2009.

Vernon, J.A., Hughen, W., and Trujillo, A. (2008). The Future of Drug Development: The Economics of Pharmacogenomics. *Expert Review of Clinical Pharmacology*. 1(1): 49-59.

Golec J. and **Vernon, J.A.** (2008). Measuring U.S. Pharmaceutical R&D Spending. *PharmacoEconomics*. 26(12): 1005-1017.

Santerre, R. and **Vernon, J.A.** (2008). How Depressed Are US Drug Consumers? *Journal of Health Care Finance*, 35(3): 13-24.

Prabir, B., Joglekar, G., Rai, S., Suresh, P. and **Vernon, J.A.** (2008). Analysis of Manufacturing Costs in Pharmaceutical Companies. *Journal of Pharmaceutical Innovation*. 3(1): 30-40.

Cook, J., and **Vernon, J.A.** (2008). Corresponding Author. Pharmaceutical Risk Sharing Agreements. *PharmacoEconomics*. 26(7): 551-557.

Abbott, T. and **Vernon, J.A.** (2007). A Financial Simulation Model of the Firm Pharmaceutical R&D Investment Decision: Implications for a New U.S. Price Control Policy. *Managerial and Decision Economics*. 28(4): 293-306.

Vernon, J.A., Hughen, W., and Trujillo, A. (2007). Pharmaceutical Manufacturing Efficiency, Drug Prices and Public Health: Examining the Causal Links. *Drug Information Journal*. 41(2): 229-239.

Santerre, R. and **Vernon, J.A.** (2007). Testing for Ownership Mix Efficiency in the Nursing Home Industry. *Inquiry*. 44(4): 381-399.

Golec J. and **Vernon, J.A.** (2007). New Estimates of Pharmaceutical Research and Development Spending by US-based Firms from 1984 to 2003. *Managerial and Decision Economics*. 28(5): 481-483.

Vernon, J.A. and Huguen, W. (2006). Dynamic Optimization and Optimal Control in Pharmacoeconomics. *Value in Health*. 9(2): 106-114.

Vernon, J.A., Golec, J., and Huguen, W. (2006). The Economics of Pharmaceutical Price Regulation and Reimportation: Refocusing the Debate. *American Journal of Law and Medicine*. 32(2):175-192.

Santerre, R and **Vernon, J.A.** (2006). Assessing the Gains from A Drug Price Control Policy in the U.S. *Southern Economic Journal*. 73(1): 233-245.

Santerre, R. and **Vernon, J.A.**, (2006). The Consumer Welfare Implications of the Hospital Ownership Mix in the US: An Exploratory Study. *Health Economics*. 15(11): 2006:1187-1199.

Vernon J.A., Johnson, S., Huguen, K. and Trujillo, A. (2006). Economic and Developmental Considerations for of Pharmacogenomic Technology. *PharmacoEconomics*. 24(4): 345-355.

Vernon, J.A. and Golec, J. (2006). From Intellectual Property Rights to Pharmaceutical R&D Investment: Considering the Potential Employment Effects of Legalized Reimportation. *Connecticut Journal of International Law*. Summer Issue.

Giaccotto, C., Santerre, and **Vernon, J.A.**,(2006). The Impact of Indirect Controls on Drug Prices and R&D in the U.S. *Cato Journal*. 26(1): 143-158.

Vernon, J.A., Goupil, S., and Golec, J. (2006). The Internet and Pharmaceutical Importation: Economic Realities and Other Related Issues. *Journal of Science and Technology*. 16(3): 545-564.

Vernon, J.A. (2005). Examining the Link Between Price Regulation and Pharmaceutical R&D Investment. (Lead Article). *Health Economics*. 14(1): 2005: 1-17.

Giaccotto, C. Santerre, R. and **Vernon, J.A.** (2005). Drug Prices and R&D Investment Behavior in the Pharmaceutical Industry. *The Journal of Law and Economics*. 48(1): 195-214.

Trujillo, A., Portillo, J, and **Vernon, J.A.** (2005). Lead Article. The Impact of Subsidized Health Insurance for the Poor: Evaluating the Colombian Experience Using Propensity Score Matching. *International Journal of Healthcare Finance and Economics*. 5(3): 211-239.

Vernon, J.A., Hughen, W., and Johnson, S. (2005). Mathematical Modeling and Pharmaceutical Pricing: Analyses Used to Inform In-licensing and Developmental Go/No-G Decisions. *Health Care Management Science*. 8(2): 167-179.

Vernon, J.A. (2005). Pharmaceutical R&D Investment and Cash Flows: An Instrumental Variables Approach to Testing for Capital Market Imperfections. Lead Article. *The Journal of Pharmaceutical Finance, Economics and Policy*. 13(4): 3-17.

Golec J. and **Vernon, J.A.** (2005). What's at Stake in Pharmaceutical Reimportation: The Costs in Terms of Life Years, Lives, and Dollars. *University of Florida Journal of Law and Public Policy*. (Spring 2005).

Vernon, J.A. (2004). New Evidence on Drug Research and Price Controls. *Regulation*. 27(3): 13-14.

36. Golec J. and **Vernon, J.A.** (2004). Pharmaceutical Reimportation: The European Experience—What the United States Can Expect. *Managed Care*. 13(6): 26-30.

Vernon, J.A. (2003). The Relationship Between Price Regulation and Pharmaceutical Profit Margins. *Applied Economics Letters*. 10(8): 467-470.

Vernon, J.A. (2003). Simulating the Impact of Price Regulation on Pharmaceutical Innovation. *Pharmaceutical Development and Regulation*. 1(1): 55-65.

Vernon, J.A. (2003). Drug Research and Price Controls. *Regulation*. 25(4): 22-25.

OTHER PUBLICATIONS: JOURNAL EDITORIALS

Vernon, J.A. (2006). Letter From the Commissioner's Office of the US FDA (New Initiatives at FDA). *PharmacoEconomics*. 24(12): 1179.

Vernon, J.A. (2007). Letter From the Commissioner's Office of the U.S. F.D.A. (Critical Path-Pharmacogenomics). *PharmacoEconomics*. 25(1): 1-2.

Vernon, J.A. (2007) .Letter From the Commissioner's Office of the U.S. F.D.A. (PDUFA-Economics Benefits and Social Welfare). *PharmacoEconomics*. 25(2): 89-90.

Vernon, J.A. (2007). Letter From the Commissioner's Office of the US FDA (Abnormal Stock Returns—Advisory Committee Meetings) *PharmacoEconomics*. 25(4): 267-268.

Vernon, J.A. (2007). Perspectives on Dynamic Optimization and Control Theory in Treating Hyperlipidemia. *PharmacoEconomics*. 25(7): 533-535.

OTHER PUBLICATIONS: REPORTS/RESEARCH SUMMARIES

Golec, J. and **Vernon, J.A.** (2007). No Free Ride on U.S. Innovation. *Medical Progress Today*. July 20, 2007.

Santerre, R. and **Vernon, J.A.** (2006). How Depressed are U.S. Drug Consumers? *Medical Progress Today*. September 29, 2006.

Vernon, J.A. (2005). Drug Price Controls, Reimportation, and the Future of Innovation. *Progressions*. 2005 Annual Outlook: 10-11.

Vernon, J.A., Santerre, R., and Giaccotto, C.(2004). Are Drug Price Controls Good for Your Health? *Medical Progress Report*. Manhattan Institute. December 2004: 1-19.

Vernon, J.A. (2004). Pharmaceutical Importation: A Long-term Disaster. *The National Law Journal*. September 13, 2004.

OTHER PUBLICATIONS: AEI-BROOKINGS JOINT CENTER

Vernon, J.A. (2007). Testimony of Dr. John A. Vernon—Hearing on the Policy Implications of Pharmaceutical Importation for U.S. Consumers. *Testimony* 07-06. <http://www.reg-markets.org/index.php> (Downloads as of 1/21/2010: 9,312).

Vernon, J.A. (2007). Prescription Drug User Fees Generate Significant Economic Benefits. *Policy Matters* 07-04. <http://www.reg-markets.org/index.php> (Downloads as of 1/21/2010: 6,166).

Vernon, J.A., Golec J., Lutter, R. and Nardinelli, C. (2006). FDA New Drug Approval Times, Prescription Drug User Fees, and R&D Spending. *Research Paper* 06-21. <http://www.reg-markets.org/index.php> (Downloads as of 1/21/2010: 10,661).

Vernon, J.A. and Santerre, R. (2004). A Cost-Benefit Analysis of Drug Price Controls in the U.S. *Related Publication* 04-29. <http://www.reg-markets.org/index.php> (Downloads as of 1/21/2010: 9,029).

Vernon, J.A. (2004). The Potential Economic Costs of Drug Importation: *Testimony* 04-01. <http://www.reg-markets.org/index.php> (Downloads as of 1/21/2010: 7,929).

Vernon, J.A. (2004). Examining the Link Between Price Regulation, Reimportation and Pharmaceutical R&D Investment. *Related Publication* 04-06. <http://www.reg-markets.org/index.php> (Downloads as of 6/2009: 9,327).

Giacotto, C, Santerre, R. and **Vernon, J.A.** (2003). Explaining Pharmaceutical R&D Growth Rates at the Industry Level: New Perspectives & Insights. *Related Publication*. 3-31. Dec 2003. <http://www.reg-markets.org/index.php> (Downloads as of 1/21/2010: 8,085).

OTHER PUBLICATIONS: NBER WORKING PAPER SERIES

Papers (Total of 11 NBER Working Papers published). Papers available at NBER: http://www.nber.org/authors/john_vernon.

OTHER PUBLICATIONS: BOOKS, BOOK REVIEWS, AND CHAPTERS

Deverka, P., **Vernon, J.A.**, and McLeod, H. (2010). Economic Opportunities and Challenges for Pharmacogenomics. Book chapter. *Annual Review of Pharmacology and Toxicology*. 50: 423-438.

Vernon, J.A. and Golec, J. (2009). Pharmaceutical Price Regulation: Public Perceptions, Economic Realities, and Empirical Evidence. Book (83 Pages). *AEI Press*. Washington, DC.

Vernon, J.A. (2004). Measuring the Gains from Medical Research (Edited by Murphy & Topel): Book Review. *Health Economics*. 13(11): 1145-46.

Vernon, J.A. (2003). Price Regulation, Profitability, and Strategic R&D Behavior in the Pharmaceutical Industry. UMI—University of Michigan Press.

U.S. CONGRESSIONAL TESTIMONY

United States House of Representatives Committee on Energy and Commerce—Are Drug Prices Rising Too Fast? Committee Chair: Henry Waxman (D-CA). December 8, 2009.

United States Senate Committee on Commerce, Science, and Transportation—
Policy Implications of Importation to US Consumers. Committee Chair: John D.
Rockefeller, IV (D-WV). March 7, 2007.

United States Senate Committee on Health Education, Labor and Pensions—
Potential Economics Costs of Drug Importation. Committee Chair: Edward
Kennedy (D-MA). May 20, 2004.

MEDIA MENTIONS, APPEARANCES, INTERVIEWS

CSPAN; National Public Radio (Marketplace) interview; research cited in New York Times, Washington Post, Wall Street Journal, Providence Journal, Hartford Courant, USA Today, Washington Times, MSNBC (interview), LA Times, Colorado Daily Camera, Investor's Business Daily, Yahoo Finance, Philadelphia Inquirer, Fort Worth Star Telegram, New London Day, and others. Also, two research press releases at the National Press Club in Washington, D.C. (twice: the economic benefits of future Alzheimer's Disease drugs and the economic cost of low health literacy in the U.S.), and several other media outlets.

SELECTED INVITED PRESENTATIONS/EXPERT PANELS

The Future of the Global Pharmaceutical Industry: Comparative Effectiveness Regulations and Pharmacogenomics. Expert Panel—Solvay, Inc. Los Angeles, CA.. January 2010.

Expert witness testimony before the U.S. House of Representatives Committee on Energy and Commerce. December 2009.

Kenan-Flagler Executive Education Conference for Talecris Senior Executives: How to Fix Healthcare in the U.S. June 2009.

American Enterprise Institute, Washing, D.C. Pharmaceutical Price Regulation: Public Perceptions, Economic Realities, and Empirical Evidence. Covered by C-SPAN. February 2009.

National Press Club, Washington, D.C. Economic Benefits of Alzheimer's Disease Innovations (Principal Investigator). May 2007.

National Press Club, Washington, D.C. Economic Cost of Low Health Literacy in the U.S. (Principal Investigator). October 2007.

Expert witness testimony before the U.S. Senate Committee on Commerce, Science, and Technology. March 2007.

UCLA School of Public Health, William Comanor's Program on the Pharmaceutical Industry (Los Angeles, CA) with Tom Abbott, co-author. 2006.

Boston University Law School; Symposium of Drug Importation. 2006.

Columbia University Symposium on Pharmaceutical Importation (New York, NY). 2005.

Senate Sponsored Debate "Should the Government Fix Drug Prices" Sponsored by Senator Sessions Office. 2005.

Ensuring a Robust Vaccine Industry (Chair) BIO 2005 Philadelphia, PA. 2005.

Expert witness testimony before the U.S. Senate Committee on Health, Education, Labor, and Pensions on Pharmaceutical Re-importation. May 2004.

United States Food and Drug Administration (FDA) Washington, DC, Policy Implication of Pharmaceutical Reimportation. 2004.

University of Connecticut Law School; Conference on Pharmaceutical Reimportation. 2004.

University of Michigan Conference on Pharmaceutical Reimportation
Pharmaceutical Reimportation: The European Experience—What Can the United States Expect? 2004.

Pfizer Global Steering Committee on Pharmacogenomics (New London, Connecticut). The Economics of Pharmacogenomic Technology for the 21st Century. 2004.

Biotechnology Industry Organization (Washington, DC). The Effects of Price Regulation and Importation on the Incentives to Innovate in the Pharmaceutical and Biotechnology Industries. 2003.

Biotechnology Industry Organization (Toronto, Canada). The Effects of Price Regulation of R&D Investment. 2002.

TEACHING EXPERIENCE

List of Courses Taught (Title, University, Semester)

Statistical Methods (MPH-, MSPH-, PhD-level), University of North Carolina, Chapel Hill. Fall 2009.

Operations Research (MPH-level, with K. Hassmiller), University of North Carolina, Chapel Hill. Spring 2009.

The Economics of the Pharmaceutical, Biotechnology, and Medical Device Industries (undergraduate section and MBA section), Wharton School, University of Pennsylvania. Spring 2008.

Managerial Economics (MBA-level), University of Connecticut. Fall 2007.

Risk Management and Insurance (undergraduate), University of Connecticut. Fall and Spring 2007.

Employee Benefits (undergraduate), University of Connecticut. Fall 2006.

Healthcare Finance (undergraduate), University of Connecticut. Spring 2006.

Research Methods in Healthcare (undergraduate), University of Connecticut. Fall 2005.

Decision Analysis (MBA-level), University of Connecticut. Spring 2005.

Investments (undergraduate), University of Connecticut. Spring 2004.

Healthcare Systems Management (MBA-level), University of Connecticut. Fall 2003.

International Business (MBA-level), Baldwin-Wallace College. Spring 2003.

Macroeconomics (MBA-level), Baldwin-Wallace College. Spring 2003.

Corporate Finance (MBA-level), Baldwin-Wallace College. Fall 2002.

International Finance (undergraduate), Baldwin-Wallace College. Fall 2002.

Principles of Microeconomics (undergraduate), Drexel University. Spring 2002.

HIGHLIGHTS OF RECENT SERVICE:

Faculty Advisor Healthcare Management Society, University of Connecticut, (2003-2005).

Faculty Advisor Risk Management and Insurance Club, University of Connecticut, (2005-2006).

Senior Economics Policy Advisor to the Commissioner's Office, U.S. Food and Drug Administration, (national service 2006-2008; financial support provided in 2009).

Masters Admission Committee, University of North Carolina, Chapel Hill, 2009.
Departmental Executive Committee, University of North Carolina, Chapel Hill, 2009.

Editorial Board, *PharmacoEconomics* (2007-present)

Guest editor, *Managerial and Decision Economics*.

Board Member: Alliance for Patient Access

Ad hoc advisor to many state and federal government agencies and departments.

Ad hoc advisor to many global biopharmaceutical companies.

Ad hoc reviewer, *European Economic Review*, *European Management Science*, *Health Affairs*, *Health Economics*, *International Journal of Healthcare Finance and Economics*, *Journal of Economics and Management Strategy*, *Pharmaceutical Development and Regulation*, *PharmacoEconomics*, *Social Science and Medicine*, *Southern Economic Journal*, *Value and Health*.

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