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CURRENT POSITION:

Senior Fellow, The Brookings Institution, 1978 - Present

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FIELDS OF SPECIALIZATION:

Industrial Organization, Antitrust Policy, Regulation

PREVIOUS POSITIONS:

Adjunct Professor, School of Public Affairs, University of Maryland, 1987 - 1993

Deputy Director, Council on Wage and Price Stability, 1977 - 1978

Acting Director, Council on Wage and Price Stability, 1977

Adjunct Associate Professor of Economics, George Washington University, 1975 - 1977

Assistant Director, Council on Wage and Price Stability, 1975 - 1977

Associate Professor of Economics, M.I.T., 1972 - 1974

Assistant Professor of Economics, M.I.T., 1966 - 1972

Johnson Research Fellow, The Brookings Institution, 1965 - 1966

Instructor, Northwestern University, 1964 - 1965

Consultant to Environmental Protection Agency, Antitrust Division Federal Trade  
Commission, Treasury Department, various years

EDUCATION:

Ph.D., Economics, Northwestern University, 1968

M.A., Economics, Northwestern University, 1965

A.B., Economics, University of Cincinnati, 1962

HONORS and AWARDS:

Phi Beta Kappa

MEMBERSHIPS:

American Economic Association  
Board of Directors, Baltimore Life Insurance Company

PUBLICATIONS:

**Books:**

*Competition and Chaos: U.S. Telecommunications since the 1996 Act.* Washington, DC: The Brookings Institution, 2005.

*Broadband: Should We Regulate High-Speed Internet Access?* (edited with James Alleman), AEI Brookings Joint Center for Regulatory Studies, 2002.

*Telecommunications Liberalization on Two Sides of the Atlantic.* (with Martin Cave) AEI Brookings Joint Center for Regulatory Studies, 2001.

*Who Pays for Universal Service? When Telephone Subsidies Become Transparent.* (with Leonard Waverman) Washington: The Brookings Institution, 2000.

*Cable TV: Regulation or Competition?* (with Harold Furchtgott-Roth), Washington: The Brookings Institution, 1996.

*Talk is Cheap: The Promise of Regulatory Reform in North American Telecommunications.* (with Leonard Waverman) Washington: The Brookings Institution, 1996.

*The Extra Mile: Rethinking Energy Policy for Automotive Transportation.* (with Pietro S. Nivola) Washington, DC: The Brookings Institution/Twentieth Century Fund, 1995.

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*After the Breakup: The U.S. Telecommunications Industry in a More Competitive Era.* Washington, DC: The Brookings Institution, 1991.

*Changing the Rules: Technological Change, International Competition and Regulation in Communications.* (Edited with Kenneth Flamm), Washington, DC: The Brookings Institution, 1989.

*Up from the Ashes: The Rise of the Steel Minimill in the United States.* (With Donald F. Barnett), Washington, DC: The Brookings Institution, 1986.

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### **Articles, Reports, and Contributions to Edited Volumes:**

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“Extending Deregulation: Make the U.S. Economy More Efficient,” in *Opportunity08:Independent Ideas for America’s Next President*. Brookings, 2007.

"Is Mandatory Unbundling the Key to Increasing Broadband Penetration in Mexico? A Survey of International Evidence," 2007, (with J. Gregory Sidak), available at SSRN: <http://ssrn.com/abstract=996065>

“The Adverse Economic Effects of Spectrum Set-Asides” (with Allan T. Ingraham), *Canadian Journal of Law and Technology*, November 2007, pp. 131-40.

“Does Video Delivered Over a Telephone Network Require a Cable Franchise?” ( with Hal J. Singer and J. Gregory Sidak) *Federal Communications Law Journal*, Vol. 59 (2007).

“Are Vertically Integrated DSL Providers Squeezing Unaffiliated ISPs (and Should We Care)?” (with Hal J. Singer), in *Access Pricing: Theory, Practice and Empirical Evidence*, Justus Haucap and Ralf Dewenter, eds., Elsevier Press, 2007.

“The Failure of Competitive Entry into Fixed-Line Telecommunications: Who Is at Fault?”(with Leonard Waverman) *Journal of Competition Law and Economics*, Vol 2, 2006, pp. 113-148.

“Broadband Communications,” in *Handbook of Telecommunications Economics, Vol II*, Sumit K. Majumdar, Ingo Vogelsang, and Martin E. Cave (eds.), Elsevier, 2005.

“The Remedy for the ‘Bottleneck Monopoly’ in Telecom: Isolate It, Share It, or Ignore It?” *University of Chicago Law Review*, Vol. 72, No.1, Winter 2005.

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"Environmental Policy in the Reagan Administration," (with Paul R. Portney), in Paul R. Portney (ed.), Natural Resources and the Environment: The Reagan Approach, The Urban Institute and Resources for the Future, 1984.

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"Air Pollution, Environmentalists, and Coal Lobby," in Roger G. Noll and Bruce M. Owen (eds.), The Political Economy of Deregulation, American Enterprise Institute, 1983.

"The Use of Environmental Policy to Reduce Economic Growth in the Sun Belt: The Role of Electric-Utility Rates" in Michael A. Crew (ed.), Regulatory Reform and Public Utilities, Lexington Books, 1982.

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"Steel Imports: Dumping or Competition?" in Regulation, July/August 1980.

"Regulation and Productivity Growth" in Proceedings: Conference on Productivity, Federal Reserve Bank of Boston, Martha's Vineyard, June 1980.

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"Paying for Government Policy Through the Price Level" in Clarence C. Walton (ed.), Inflation and National Survival, 1979.

"Is Government Regulation Crippling Business?" in Saturday Review, January 20, 1979.

"Federal Government Initiatives to Reduce the Price Level," Brookings Papers on Economic Activity, 1978:2.

"Competition and 'Dumping' in the U.S. Steel Market," Challenge, July/August 1978.

"Regulation of Television Broadcasting: How Costly is the 'Public Interest'?" in Regulation, January/February 1978.

"Placing a Value on the Electromagnetic Spectrum: A Suggested Approach for FCC Decision-Making," Proceedings of the Conference on Telecommunications Policy Research, Airlie House, 1977.

"Theoretical Issues in the Regulation of Communications Common Carriage" in Rate of Return Regulation, FCC Future Planning Conference, July 1976.

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#### RECENT CONSULTANCIES:

Bahamas Public Utilities Commission (2008) – Testimony in law suit involving the privatization of Bahamas Telephone Company

TELUS (2007-08) – Testimony before the Canadian Radio-Television and Telecommunications Commission on various regulatory issues

Telmex (2007-08) – Meetings with government officials on various telecom regulatory issues

Gulf States Recovery Group (2008) – Testimony in private antitrust suit involving steel industry

Schmoltz and Bickenback AG (2007-08) – Testimony before the International Trade Commission on stainless steel imports

Puerto Rico Telephone Company (2007) – Testimony before Puerto Rico Telecommunications Regulatory Board