

PETER REGINALD HARTLEY

Department of Economics, MS#22
Rice University
6100 S. Main Street
Houston, TX 77005-1892
Telephone: (713) 348 2534

5735 Indigo Street
Houston, TX 77096

(713) 988-2469

ACADEMIC QUALIFICATIONS

University of Chicago

Ph.D., 1980
Dissertation: “Distributional Effects and the
Neutrality of Money”
(Dissertation Chairman: Robert E. Lucas Jr.)
Course Concentrations: monetary economics,
international finance, mathematical economics,
econometrics

Australian National University

M.Ec., 1977
Course Concentrations: microeconomic theory,
public finance, international trade, econometrics

B.A. (first class honours), 1974
Major: mathematics

EMPLOYMENT

Rice University

| | |
|---|----------------|
| George A. Peterkin Professor of Economics | 2019 – present |
| The George and Cynthia Mitchell Chair in Sustainable Development | 2007 – 2019 |
| Professor | 1993 – 2007 |
| Associate Professor | 1986 – 1993 |
| James A. Baker III Institute for Public Policy, Rice Scholar | 1999 – present |
| Economics Department Chair | 2000 – 2005 |
| Academic Director, Shell Center for Sustainable Development | 2007 – 2010 |

University of Western Australia

| | |
|---|-------------|
| Visiting Professor in Energy & Resource Economics | 2018 – 2019 |
| BHP Billiton Chair in the Business of Energy and Resources | 2012 – 2017 |
| Professor-at-Large | 2011 – 2012 |

Princeton University

| | |
|---------------------|-------------|
| Assistant Professor | 1980 – 1986 |
|---------------------|-------------|

University of Melbourne

Visiting Professor 1996 - 1997

Australian National University

Visiting Professor 1992 – 1995

Tasman Institute, Melbourne

Executive Director 1996 – 1997

Visiting Professorial Fellow 1990 – 1992

Monash University, Melbourne

Visiting Professorial Fellow

Centre of Policy Studies 1987 – 1989

Visiting Senior Research Fellow

Centre of Policy Studies 1980 – 1986

Government of Australia, Department of Prime Minister and Cabinet

Economic Division 1976 – 1977

Priorities Review Staff 1975 – 1976

TEACHING EXPERIENCE

Graduate Level:

energy and resource economics,
microeconomics, dynamic optimization,
macroeconomics, monetary economics,
mathematical economics, economic policy,
international finance, time series econometrics,
applied econometrics, executive corporate
finance

Undergraduate Level:

corporate finance, environmental
economics, microeconomic analysis under
uncertainty, intermediate macroeconomics,
public finance, introductory econometrics

RESEARCH

Refereed Articles:

“The Marginal Cost of Electricity Supply in Victoria”, joint with C.D. Trengove, *The Economic Record*, 60, 340-355, 1984.

“Cheap Resources into Expensive Energy”, *Institute of Public Affairs Review*, 37, No. 4, 160-164, 1984.

“Who Benefits from Public Utilities?”, joint with C.D. Trengove, *The Economic Record*, 163-179, June 1986.

“Portfolio Theory and Foreign Investment - the Role of Non-marketed Assets,” *The Economic Record*, 286-295, September 1986.

“The Liquidity Services of Money”, *International Economic Review*, 1–24, vol 29 (1) February, 1988

“Real Interest Rates and Home Goods: A Two-Period Model”, joint with A.S. Kyle, *The Economic Record*, 168-177, September 1988.

“Equilibrium in an Industry with Moderate Investment Economies of Scale”, joint with A.S. Kyle, *The Economic Journal*, 392-407, June 1989.

“Criminal Choice: An Economic View of Life Outside the Law”, joint with Cathy L. Buchanan, *Policy*, December 1989.

“Wage Differentials and Asymmetric Mobility”, joint with Diana Strassmann, *The Social Science Journal*, 159-180, vol 27(2), 1990.

“East-West Airlines Sydney-Melbourne Service: Market Expansion or Demand Diversion?”, joint with C. D. Trengove, *The Economic Record*, vol 66 (194), 203-220, September 1990. Chosen as the best paper published in *The Economic Record* in 1990.

“Hoarding in General Equilibrium”, *Economica*, 467-483, vol 57 (228) November, 1990

“Inside Money and Monetary Neutrality”, joint with Carl E. Walsh, *Journal of Macroeconomics*, 395-416, Vol 13(3), Summer 1991.

“A Generalized Method of Moments Approach to Estimating a Structural Vector Autoregression”, joint with Carl E. Walsh, *Journal of Macroeconomics*, 199-232, Vol 14(2), Spring 1992.

“The Tariff: An Expensive but Hidden Subsidy,” *Policy* (Summer 1992/93), 55-56.

“Interest Rates in a Credit Constrained Economy”, *International Economic Review*, February 1994, Vol 35, No. 1, 23-60.

“Consumer Rationality and Credit Cards”, joint with Dagobert L. Brito, *Journal of Political Economy*, April 1995, 400-433.

“Value function approximation in the presence of uncertainty and inequality constraints: An application to the demand for credit cards”, *Journal of Economic Dynamics and Control*, Vol 20, 1996, 63-92.

“Defects of the Comparative Negligence Standard,” joint with Dagobert L. Brito, *Agenda*, Volume 3, number 4, 1996, 449-458.

- “Inside Money as a Source of Investment Finance”, *Journal of Money, Credit and Banking*, vol 30 (2, May, 1998): 193–217.
- “Reform of the Electricity Supply Industry”, *Economia Mexicana*, vol VIII, (1, 1999), 45-90,
- “A Model of Optimal Dynamic Oil Extraction: Evidence from a Large Middle Eastern Oil Field,” with Robin C. Sickles, Baker Institute, Rice University, *Journal of Productivity Analysis*, 2001:59-71
- “Coherent probability from incoherent judgment”, joint with Daniel Osherson, David Lane and Richard R. Batsell, *Journal of Experimental Psychology: Applied*, Vol 7 (1), 2001: 3 - 12.
- “Controlling Carbon Dioxide: An Analysis of Competing Marginal Effects” *International Association of Energy Economists Newsletter*, Fourth Quarter, 2001, 26-29
- “Macroeconomic fluctuations: Demand or supply, permanent or temporary?” with Joseph A. Whitt, Jr. *European Economic Review*, volume 47 no. 1 (February 2003), pp. 61-94.
- “Economic Issues of Natural Gas Trade in Northeast Asia: Political Bridges and Economic Advantages”, joint with Amy Myers Jaffe, Kenneth Medlock III, *Joint U.S. - Korea Academic Studies*, vol 16, 2006: 37 60
- “Expectations and the Evolving World Gas Market,” joint with Dagobert Brito, *The Energy Journal*, 28(1) January 2007, pp 1–24.
- “A Model of the Operation and Development of a National Oil Company,” joint with Kenneth Medlock III, *Energy Economics*, 30(5) September 2008, pp 2459-2485.
- “The Relationship between Crude Oil and Natural Gas Prices,” joint with Jennifer Rosthal and Kenneth Medlock III, *The Energy Journal*, 29(3) June 2008, pp 47–65.
- “Optimal Dynamic Production from a Large Oil Field in Saudi Arabia,” joint with Jack Gao and Robin Sickles, *Empirical Economics*, 2008
- “Potential Futures for Russian Natural Gas Exports,” joint with Kenneth Medlock III, *The Energy Journal*, 2009 Special Issue, 73–95.
- “Empirical Evidence on the Operational Efficiency of National Oil Companies,” joint with Stacy Eller and Kenneth Medlock III, *Empirical Economics*, 2011, 40 (3): 623-643
- “Changes in the Operational Efficiency of National Oil Companies”, joint with Kenneth Medlock III, *The Energy Journal*, 2013, 34 (2): 27–57

“The Relationship between Crude Oil and Natural Gas Prices: The Role of the Exchange Rate”, joint with Kenneth B. Medlock III, *The Energy Journal*, 2014, 35 (2): 25–44

“The Future of Long-term LNG Contracts,” *The Energy Journal*, 2015, 36(3): 209–233, Campbell Watkins award for the best paper published in *The Energy Journal* in 2015

“Local Employment Impacts of Competing Energy Sources: the Case of Shale Gas Production and Wind Generation in Texas,” joint with Kenneth B. Medlock III, Ted Temzelides and Xinya Zhang, *Energy Economics* 49 (May, 2015): 610–619

“Energy Sector Innovation and Growth: An Optimal Energy Crisis”, joint with Kenneth B. Medlock III, Ted Temzelides and Xinya Zhang, *The Energy Journal*, 2016, 37(1): 233–258

“The Valley of Death for New Energy Technologies,” joint with Kenneth B. Medlock III, *The Energy Journal*, 2017, 38(3): 33–61

“Employment Impacts of Upstream Oil and Gas Investment in the United States,” joint with Mark Agerton, Kenneth B. Medlock III and Ted Temzelides, *Energy Economics*, 2017, 62(2): 171–180

“Asian Spot Prices for LNG and other Energy Commodities” joint with Yihui Lan and Abdullahi Alim, *The Energy Journal*, 2018, 39(1): 95–113

“The cost of displacing fossil fuels: Some evidence from Texas”, *The Energy Journal* 2018, 39(2): 219–244

“Electricity Reform and Retail Pricing in Texas” joint with Kenneth B. Medlock III and Olivera Jankovska, *Energy Economics* 2019, 40(May): 1–11

“Western Australia’s Domestic Gas Reservation Policy: Modelling the economic impact with a CGE approach,” joint with Kelly Neill, Rod Tyers and Philip Adams, *Economic Record* 2019, 95(308): 90–113

“Multiple Volatility Real Options Approach to Investment Decisions under Uncertainty,” joint with Atul Chandra and Gopalan M. Nair, forthcoming *Decision Analysis*

“Debt and Optionality in U.S. LNG Export Projects,” joint with Kenneth B. Medlock III, *The Energy Journal*, 2023, 44(2), DOI: 10.5547/01956574.44.2.phar

“Temperature, storage, and natural gas futures prices,” joint with Yanting Chen and Yihui Lan, University of Western Australia, *The Journal of Futures Markets*, 2023, 43(4), <https://doi.org/10.1002/fut.22402>

“It pollutes, so tax it: Need we say more about CO₂?”, *Global Warming Policy Foundation*, Technical Paper 6, 2023,
<https://www.thegwpcf.org/content/uploads/2022/10/Hartley-Carbon-Taxes.pdf>

“The Texas Deep Freeze of February 2021: What Happened and Lessons Learned?”, joint with Kenneth B. Medlock III and Elsie Hung, forthcoming *Economics of Energy and Environmental Policy*

Draft working papers

“Stochastic multiple equilibriums in the world oil market,” joint with Kenneth B. Medlock III and Mark Finley, Rice University

“Compound multiple volatility real options approach to investment decisions under uncertainty,” joint with Atul Chandra and Gopalan M. Nair, University of Western Australia

“Levered multiple volatility real options approach to investment decisions,” joint with Atul Chandra and Gopalan M. Nair, University of Western Australia

“Multiple volatility real option games approach for simultaneous investment decisions,” joint with Atul Chandra and Gopalan M. Nair, University of Western Australia

“Costing Wind Power in Western Australia,” joint with Paul Crompton, University of Western Australia

“The Impact of Household Solar PV in Western Australia,” joint with Madison Ann Pigliardo and Paul Crompton, University of Western Australia

Books:

Criminal Choice: The Economic Theory of Crime and its Implications for Crime Control, with Cathy L. Buchanan, Sydney: Centre for Independent Studies, 1992.

The Economic Theory of Crime and Crime in New Zealand, Wellington: The New Zealand Business Roundtable, 1996.

Conservation Strategies for New Zealand, Wellington: The New Zealand Business Roundtable, December, 1997.

Equity as a Social Goal, Wellington: The New Zealand Business Roundtable, June, 2000.

Monetary Arrangements in New Zealand, Wellington: The New Zealand Business Roundtable, July, 2001.

Chapters in books:

“Plant Distribution and Individual Plant Photosynthesis”, joint with B. R. Trenbath, in *Proceedings of the 4th International Congress on Photosynthesis*, Reading, UK, September, 1977.

“Rational Expectations and the Foreign Exchange Market”, in Jacob. A. Frenkel (ed.), *Exchange Rates and International Macroeconomics*, University of Chicago Press, N.B.E.R., 1984.

“The Economics of Medical Insurance”, joint with A.S. Kyle in *Medical Care and Markets*, C.L. Buchanan and E.W. Prior (eds.), Sydney: Allen and Unwin, 1984.

“Ownership, Diversification and Risk - the Impact of the Mineral Sector” in *The Minerals Sector and the Australian Economy*, M.G. Porter and L.H. Cook (eds.), Sydney: Allen and Unwin, 1984.

“Is the Legislated Telecom Monopoly ‘Efficient’?”, joint with C.D. Trengove in *Competition and Competitiveness in Telecommunications*, proceedings from a symposium, August 1987.

“Medium term outlook - growth, distribution and the environment”, joint with John W. Freebairn and Michael G. Porter, 23-43, *Savings and Productivity: Incentives for the 1990's*, Sydney: Allen and Unwin, 1989

“Monetary policy”, joint with Michael G. Porter, 44-72, *Savings and Productivity: Incentives for the 1990's*, Sydney: Allen and Unwin, 1989

“Labour markets”, joint with Michael G. Porter, 73-92, *Savings and Productivity: Incentives for the 1990's*, Sydney: Allen and Unwin, 1989

“An adjusted income tax base system”, joint with John W. Freebairn, 117-132, *Savings and Productivity: Incentives for the 1990's*, Sydney: Allen and Unwin, 1989

“Monetary management in Australia”, joint with Michael G. Porter, 48-64, *The Good Fight: Essays in honor of Austin Stewart Holmes*, Sydney: Allen and Unwin, 1989

“A Framework for Policy”, joint with Alan Moran, Andrew Chisholm and Michael Porter, Chapter 2 in *Markets, Resources and the Environment*, Melbourne: Allen & Unwin, January, 1991.

“A Green Thumb for the Invisible Hand”, joint with Michael Porter, in Ian Marsh, ed, *The Environmental Challenge*, Sydney: Longman/Cheshire, 1991.

“Competition Policy in Australia”, a comment on remarks by Professor Baxt, Chairman of the Trade Practices Commission, in *The Function and Purpose of Corporate Law*, Melbourne: Tasman Institute, April 1991.

“The Effects of Minimum Wage Laws on the Labour Market”, *Proceedings of the H.R. Nicholls Society’s XIIIth Conference*, Adelaide, SA, November 13-14, 1992.

“Crime Control in the ACT,” chapter joint with Cathy L. Buchanan in *Capital Ideas*, Robert Albon and David Hughes, eds, Canberra: Urban Research Unit, 1993

“Financial Intermediation,” *Business Cycles and Depressions, An Encyclopedia*, David Glasner, ed., New York: Garland Publishing, Inc., 1997: 231-233, with Carl E. Walsh.

“The Baker Institute World Gas Trade Model,” joint with Kenneth Medlock III, chapter 11 of *Natural Gas and Geopolitics: From 1970 to 2040*, edited by David Victor, Amy Jaffe and Mark Hayes, Cambridge UK: Cambridge University Press, 2006

“Political and Economic Influences on the Future World Market for Natural Gas,” joint with Kenneth Medlock III, chapter 12 of *Natural Gas and Geopolitics: From 1970 to 2040*, edited by David Victor, Amy Jaffe and Mark Hayes, Cambridge UK: Cambridge University Press, 2006

“Climate Change and Energy Security Policies: Are They Really Two Sides of the Same Coin?” Chapter 4, pages 58–65, in *Routledge Handbook on Transitions to Energy and Climate Security*, edited by Robert E. Looney, Abingdon, Oxon; New York, NY: Routledge, 2017

Selected non-refereed articles, policy papers, book reviews:

Review of The International Transmission of Inflation, Michael R. Darby and James R. Lothian, eds, in *Journal of International Economics*, 18, 386-389, 1985.

“Privatisation - Some Lessons from the Public Utilities”, *Australian Institute of Public Policy*, Occasional Paper #5, June, 1986 (refereed)

“Financial Intermediation, Monetary Policy and Equilibrium Business Cycles”, *Federal Reserve Bank of San Francisco Economic Review*, joint with Carl E. Walsh, 19-29, Fall 1988.

Forests and Markets, joint with Terry Anderson, Andrew Chisholm and Michael Porter, a submission to the Resource Assessment Commission Inquiry into the Use of Australia's Native Forests, Melbourne: Tasman Institute Occasional Paper B1, May, 1990.

Slogans or Policies: A Critique of ‘Ecologically Sustainable Development’, joint with Michael Porter and Andrew Chisholm, Tasman Institute Occasional Paper B3, October, 1990.

Treasurer Keating's Legacy, joint with Michael G. Porter, Melbourne: Tasman Institute, Occasional Paper No. B10, July, 1991.

Review of Taking Money Seriously by David Laidler, *Journal of Money Credit and Banking*, 405-408, Vol 24 (3), 1992.

“Financial-Real Interactions in an Economy with Inside Money and Credit Constraints”, *Economic Modeling Bureau of Australia* conference, Port Douglas, Australia, September 2–5, 1992.

“The Reich Stuff,” A review of *The Work of Nations—Preparing Ourselves for 21st Century Capitalism* by Robert B. Reich, *Policy* (Autumn 1993), 42-44.

“*Rail in Australia – Towards Rolling Privatisation*,” Tasman Institute Conference Paper, joint with Michael Porter and Michael Warby, July, 1996

“*The Keys to Success in Providing Quality Water Services*,” Tasman Institute Conference Paper, joint with Michael Porter, August 1996

How is Infrastructure Different?, Melbourne: The Infrastructure Forum, July, 1997.

Public or Private?, Melbourne: The Infrastructure Forum, July 1997.

Unbundle or Integrate?, Melbourne: The Infrastructure Forum, July, 1997.

Can International Tradeable Carbon Dioxide Emission Quotas Work?, Melbourne: APEC Studies Centre, Monash University, August, 1997.

“First Things First: Development and Global Warming,” with Kenneth Medlock III and Michael Warby, James A. Baker III Institute for Public Policy, March, 1999.

“Reform of the Electrical Supply Industry in Japan,” James A. Baker III Institute, May, 2000

“Controlling Carbon Dioxide: Let's Wait and See”, with Kenneth Medlock III, James A. Baker III Institute for Public Policy, September, 2000

“Global Warming: Science and Policy, Conference Summary” with Kenneth Medlock and André Droxler, James A. Baker III Institute for Public Policy, October, 2000

“Controlling Carbon Dioxide: An Analysis of Competing Marginal Effects” with Kenneth Medlock III, *International Association of Energy Economists Newsletter*, Fourth Quarter, 2001, 26-29

“Using Sakhalin Natural Gas in Japan,” with Dagobert L. Brito, James A. Baker III Institute, November, 2001

“Evolution of the International LNG Market,” with Dagobert L. Brito, James A. Baker III Institute, June, 2002

“The Baker Institute World Gas Trade Model,” with Kenneth B. Medlock III, James A. Baker III Institute, May 2004

“Political and Economic Influences on the Future World Market for Natural Gas,” with Kenneth B. Medlock III, James A. Baker III Institute, May 2004

“The Role of Nuclear Power in Enhancing Japan’s Energy Security,” with Ken Medlock III, Atsuko Saruhashi, Jill Nesbitt, Stacy Eller, James A. Baker III Institute, September 2004

“Russian Natural Gas Supply: Some Implications for Japan,” joint with Kenneth Medlock III and Jill Elise Nesbitt, James A. Baker III Institute, October 2004

“The Future World Market For Natural Gas” *Natural Gas & Electricity*, with Kenneth Medlock III, Volume 22, number 1, August 2005, Wiley InterScience

“A Model of the Operation and Development of a National Oil Company,” with Kenneth B. Medlock III, James A. Baker III Institute, March 2007

“Empirical Evidence on the Operational Efficiency of National Oil Companies,” with Kenneth B. Medlock III and Stacy L. Eller, James A. Baker III Institute, March 2007

“Electricity Sector Demand for Natural Gas in the United States,” with Kenneth Medlock III and Jennifer Rosthal, James A. Baker III Institute, November 2007

“International Influences on the Link between U.S. Crude Oil and Natural Gas Prices,” , James A. Baker III Institute, November 2007

“The Relationship between Crude Oil and Natural Gas Prices,” with Kenneth Medlock III and Jennifer Rosthal, James A. Baker III Institute, November 2007

“North American Security of Natural Gas Supply in a Global Market,” James A. Baker III Institute, November 2007

“The Future of Russian Natural Gas Exports,” with Ken Medlock, James A. Baker III Institute, May 2008

“Nuclear Power Trends in the World,” with Jorge Gonzalez-Gomez, James A. Baker III Institute, May 2008

“Energy Security in a Context of Hyper-Social Mobilization: Insights from Bolivia, with David R. Mares and Kenneth B. Medlock III, James A. Baker III Institute, May 2008

“Climate Policy and Energy Security: Two Sides of the Same Coin?” with Kenneth B. Medlock III, James A. Baker III Institute, May 2008

“Recent Developments in LNG Markets,” *USAEE Dialogue*, 23(1), 2014

“The Market Impacts of New Natural Gas-Directed Policies in the United States,” joint with Kenneth B. Medlock III, James A. Baker III Institute, February, 2015

PROFESSIONAL SERVICE & ACADEMIC HONORS

President 2015, 2022
Executive Vice President 2023
International Association for Energy Economics

Member of the Council 2013-2019, 2021-Present
International Association for Energy Economics

President US Association for Energy Economics 2012

Member of the Council 2007-12, 2017
US Association for Energy Economics

Senior Fellow Award 2011
US Association for Energy Economics

Campbell Watkins Award for the best paper published in the *Energy Journal*, 2015 2016

The best paper published in the Economic Record in 1990 Economic Society of Australia and New Zealand

Lily Honor Scholarship University of Chicago, 1977-80

Master’s Scholarship Australian National University, 1976-77

Australian Statistical Society Prize 1973

National Undergraduate Scholarship Australian National University, 1971-74

Placed 3rd in Mathematics, 5th in Science, 7th in Geography NSW Higher School Certificate, 1970

RESEARCH FUNDING

| | |
|--|--|
| 1999 – present, James A. Baker III Institute for Public Policy, 2000-2001, McGovern Foundation 2000-2003, NSF | Energy economics Alcohol abuse by HISD students Probability Assessments with an Application to Environmental Decision-Making |
| 2000-2001, New Zealand Business Roundtable 2000, Exxon-Mobil Corporation | Monetary Arrangements in New Zealand Grant to organize a conference on Global Warming |
| 1998-2000, New Zealand Business Roundtable 1996-1997, New Zealand Business Roundtable | Equity as a Social Goal Conservation Strategies for New Zealand |

CONSULTING EXPERIENCE:

Electricity industry, telecommunications, public utilities, energy and mining industries, airline industry, environmental economics.

Date of vita: June 15, 2023

Citizenship: Dual Australian and United States citizenship