James Joseph Heckman Department of Economics University of Chicago 1126 East 59th Street Chicago, Illinois 60637 Telephone: (773) 702-0634

Fax: (773) 702-8490 Email: jjh@uchicago.edu

Personal

Date of Birth: April 19, 1944

Place of Birth: Chicago, Illinois

Education

B.A. 1965 (Math) Colorado College (summa cum laude)

M.A. 1968 (Econ) Princeton University

Ph.D. 1971 (Econ) Princeton University

Dissertation

"Three Essays on Household Labor Supply and the Demand for Market Goods." **Sponsors:** S. Black, H. Kelejian, A. Rees

Graduate and Undergraduate Academic Honors

Phi Beta Kappa Woodrow Wilson Fellow NDEA Fellow NIH Fellow Harold Willis Dodds Fellow

Post-Graduate Honors

Honorary Degrees and Professorships

Honorary Professor, Harbin Institute of Technology, P. R. China, October, 2007.

Doctor Honoris Causis, University of Montréal, May 2004.

Doctor Honoris Causis, Bard College, May 2004.

Honorary Professor, Wuhan University, Wuhan, China, 2003.

Doctor Honoris Causis, UAEM, Mexico, January 2003.

Doctor Honoris Causis, University of Chile, Fall 2002.

Honorary Doctor of Laws, Colorado College, 2001.

Honorary Professor, Huazhong University of Science and Technology, Wuhan, China, 2001.

Honorary Member, Latin and Caribbean Economic Association, 1999.

Honorary Professor, University of Tucuman, October, 1998.

Awards

Bank of Sweden Prize in Economic Sciences in Honor of the Memory of Alfred Nobel, 2000.

Distinguished Contributions to Public Policy for Children Award, Society for Research in Child Development, 2009.

Gold Medal of the President of the Italian Republic, Awarded by the International Scientific Committee of the Pio Manzù Centre, 2008.

Sun Yefang Economic Science Award, 2007.

Dennis J. Aigner Award for Applied Econometrics, Journal of Econometrics, 2007.

Theodore W. Schultz Award, American Agricultural Economics Association Foundation, January 2007.

Ulysses Medal, University College Dublin, 2006.

Dennis J. Aigner Award for Applied Econometrics, *Journal of Econometrics*, 2005.

Jacob Mincer Award for Lifetime Achievement, Society of Labor Economics, 2005.

Medal of Excellence, Centres of Excellence for Children's Well-Being for "Exceptional Contributions to Childhood Development", May 2004.

Elevated to Distinguished Service Professorship, University of Chicago, 1995-.

A. Whitney Griswold Professor of Economics, Yale University, 1988–1990.

Henry Schultz Professor of Economics, University of Chicago, 1985-.

Statistician of the Year, Chicago Chapter of the American Statistical Association, 2002.

First Annual Louis T. Benezet Distinguished Alumnus Award, Colorado College, 1985.

Irving Fisher Professor, Yale University, Fall 1984.

John Bates Clark Medal (American Economics Association), 1983.

Fellowships

Elected Member, National Academy of Sciences, 1992–.

Resident Member, American Philosophical Society, 2008–

Fellow, American Academy of Arts and Sciences, 1985-.

Senior Research Fellow, American Bar Foundation, 1991-.

Fellow, Econometric Society, 1980-.

Fellow, Society of Labor Economics, 2005–.

Fellow, International Statistical Institute, 2008-.

Fellow, American Statistical Association, 2001–.

Fellow, Journal of Econometrics, 2005-.

Post Graduate Support for Released Time

John Simon Guggenheim Memorial Fellowship, 1978–1979.

Fellow, Center for Advanced Study in the Behavioral Sciences, Stanford University, 1978–1979.

Social Science Research Council Training Fellow, 1977–78.

Harry Scherman Fellow, National Bureau of Economic Research, 1972–1973.

Major Invited Lectures

- 1. The Jacob Marschak Interdisciplinary Colloquium on Mathematics in the Behavior Sciences at UCLA. October 6, 2008.
- 2. "The Economics and Psychology of Inequality and Human Development," Marshall Lecture, European Economics Association, Milan, Italy. August 29, 2008.
- 3. "How Viable is the Welfare State?" World Justice Forum, Vienna, Austria. July, 2008.
- 4. "The Option Value of Educational Choices and the Rate of Return to Educational Choices," Cowles Foundation Structural Conference, Yale University. June 13, 2008.
- 5. Coping with the Accident of Birth: The Case for Early Childhood Interventions. "Skills, Schools and Synapses," Den Haag, Netherlands. May 27, 2008.
- 6. Leibniz Network Conference, "Noncognitive Skills: Acquisition and Economic Consequences," Mannheim, Germany. May 15, 2008.
- 7. Albert Rees Memorial Lecture, "Understanding the GED," Society of Labor Economists Annual Meetings, May 9, 2008.
- 8. King Saud University Lecture "How Viable is the Welfare State?" and "The Technology of Skill Formation," Riyadh, Saudi Arabia. March 8-10, 2008.
- 9. Congress on Early Childhood Education: "Early Childhood Education–Educational Investments with Better Effects", "The Dynamism of Educational Investments in the Course of Life: Why Saving in Education is Expensive." Leipzig, Germany. March, 2008.

- 10. George Seltzer Distinguished Memorial Lecture, Minneapolis, Minnesota, December 6, 2007.
- 11. Bertha C. and Roy E. Leigh Distinguished Lecture in Economics, Pullman, Washington, November 29, 2007.
- 12. "The Technology of Skill Formation," Guinness Lecture, Coombe Women's Hospital, Dublin, Ireland, November 2, 2007.
- 13. "The Technology of Building Human Capacities: Lessons for Public Policy," Building Blocks Conference, Alberta, Canada, May 2007.
- 14. Keynote Address, "Investing in Disadvantaged Young Children Is Good Economics and Good Public Policy," National Summit on America's Children, Washington D.C., May 2007.
- 15. "The Economics, Technology and Neuroscience of Human Capability Formation," Allostasis/Allostatic Load Conference, Princeton University, May 2007.
- 16. "Left Behind: the GED and America's Dropout Problem," Brookings Institution, Hamilton Project Forum: The Role of Education in Promoting Opportunity and Economic Growth, Washington D.C., March 2007.
- 17. Plenary Address, "The Evolution of Labor Earnings Risk in the U.S. Economy," 4th International Finance Conference in Collaboration with Université Cergy-Pontoise, REMEREG and ISC Paris, Diar el Medina, Tunisia, March 2007.
- 18. Theodore W. Schultz Lecture, "The New Economics of Child Quality," American Economic Association, January 2007.
- 19. Keynote Address, "What Lessons Should China Learn from European Welfare States?" WEAI Pacific Rim Conference, Beijing, China, January 2007.
- 20. Max Weber Lecture, "The Economics of Human Development," European University, Florence, Italy, October 2006.
- 21. Koopmans Lectures, "Cowles Commission Structural Models, Causal Effects and Treatment Effects: A Synthesis," "Instrumental Variables: Then and Now," and "The Evolution of Labor Earnings Risk in the US Economy," Cowles Foundation, Yale University, September 2006.
- 22. Marshall Lecture, Annual Meeting of the European Economic Association. August, 2006.
- 23. Michelson Memorial Lecture, "Skills, Schools and Synapses," US Naval Academy, September 2006.
- 24. Conway Institute Lecture, "The Technology and Neuroscience of Skill Formation," University College Dublin, June 2006.
- 25. Ulysses Medal Lecture, "The Economics of Child Development," University College Dublin, June 2006.

- 26. Invited Lecture, "Understanding Instrumental Variables in Models with Essential Heterogeneity," "Econometric Evaluation of Public Policies: Methods and Applications" Conference, Center for Research in Economics and Statistics, Paris, December 2005.
- Inaugural Lecture, "Credit Constraints, Family Constraints and Optimal Policies to Reduce Inequality and Promote Productivity," Geary Institute, University College Dublin, April 2005.
- 28. Richard Ely Distinguished Lecturer, Johns Hopkins University, April 2005. Talks: "Inequality in America: What Role for Human Capital Policies?" "Understanding Inequality: Separating Uncertainty from Heterogeneity in Life Cycle Earnings," "Match Bias and Economic Returns to the GED," "Understanding Instrumental Variables in Models with Essential Heterogeneity," "The Importance of Cognitive and Noncognitive Skills in Explaining a Variety of Socioeconomic Outcome Measures"
- 29. Hicks Lecture, Oxford University, April 2004.
- 30. Keynote Lecture, Great Hall of the People, Beijing, December 2003 (Major Lecture on China's Investment in Human Capital at Renmin University's Anniversary Celebration).
- 31. Nobel Symposium Lecturer, St. Petersburg, Russia, June 2003.
- 32. Munich Economic Summit, Munich, May 2003.
- 33. European Society for Population Economics, 2003.
- 34. Keynote Lecture, Tinbergen Centenary, Rotterdam, April 2003.
- 35. W.P. Carey Lecture, Colorado College, February 2002.
- 36. Miguel Sidrauski Lecture, Latin American Econometric Society Meetings, Sao Paulo, 2002.
- 37. Tinbergen Lecture, Royal Dutch Economics Association, October 2002.
- 38. Walras-Pareto Lectures, University of Lausanne, October 2002.
- 39. Gorman Lectures, University College, London, Fall 2001.
- 40. Klein Lecture, University of Pennsylvania, October 2001.
- 41. Review of Economics and Statistics Lecture, April 2001.
- 42. Economic Journal Lecture, Royal Economic Society, April 2001.
- 43. Jovanovich Lecture, Colorado College, February 2001.
- 44. Distinguished Lecture, Southern Economics Association, Washington, D.C., November 2000.
- 45. Fisher-Schultz Lecture, World Meeting of the Econometric Society, August 2000.
- 46. Yoram Ben Porath Memorial Lecture, Hebrew University, (First in series), June 2000.
- 47. Wildavsky Forum Lecture, University of California, Berkeley, April 1999.
- 48. Woytinsky Lecture, University of Michigan, October 1999.
- 49. Invited Lecture, Latin American Meetings of the Econometric Society, Cancun, Mexico, August 1999.

- 50. Invited lecturer, Econometric Society Meetings, Lima, Peru, August 1998.
- 51. Distinguished Lecture, Institute for Survey Research, University of Michigan, January 1998.
- 52. McKinley Lecturer, University of Illinois, March 1998.
- 53. Fishelson Memorial Lecture, Tel Aviv University, December 1998.
- 54. Malim Harding Lecturer, University of Toronto, October 1997.
- 55. Jacob Marschak Lecturer, Far Eastern Econometric Society Meetings, Hong Kong, July 25, 1997.
- 56. Economics Study Group, Gronigen, Holland, June 1997.
- 57. Invited Lecture, Latin American Econometric Society Meetings, Santiago, Chile, August 1997.
- 58. *Journal of Applied Econometrics* Lectures (First Lecturer in a new series established by the *Journal of Applied Econometrics*, Yale University, April 17–18, 1997).
- 59. Keynote Lecture, Latin American Econometric Society, Santiago Chile, August 1997.
- 60. Keynote Lecture, Society For Economic Dynamics and Control, Mexico City, June 27, 1996.
- 61. Keynote Lecture, Latin American Econometric Society, Rio de Janeiro, August 1996.
- 62. Keynote Speaker, American Sociological Association Meetings, New York, August 16, 1996.
- 63. Gilbert Lecture, University of Rochester, April 1996.
- 64. Seymour Harris Lectures, Kennedy School of Government, 1995. (First lecturer in a newly endowed series) Lectures to be published by Harvard University Press.
- 65. Distinguished Quantitative Social Science Lecture, University of Indiana, April 1996.
- 66. Invited Lecture, Centenary of Ragnar Frisch, First Nobel Economist, Oslo, March 1995.
- 67. Invited Lecture, Public Policy School, SUNY Albany, October 1994.
- 68. Invited Lecture, Latin American Econometric Society, Caracas, August 1994.
- 69. Aloysius Dunaway Memorial Lecture, Michigan State University, April 1993.
- 70. Carl Synder Memorial Lecture, University of California at Santa Barbara, Spring 1992.
- 71. H. Chase-Stone Lecture in Economics, Colorado College, 1992 (participant in three day symposium).
- 72. Martin Luther King Lecturer, University of Michigan, 1991.
- 73. Invited Lecture, Econometric Study Group, Royal Economic Society, Bristol, England, 1991.
- 74. Barcelona Lecture, Sixth World Econometric Society, 1990.
- 75. Erik Malmstens Distinguished Guest Professor of Economics, Gothenburg University, Gothenburg, Sweden, 1990.
- 76. Invited Major Lecture, University of Western Ontario, 1989.

- 77. Invited Major Guest Lecture, Joint Franco-Belgian Conference in Statistics, Toulouse, France, 1988.
- 78. Chung-Hua Distinguished Visitor and Academica Sinica Lectures, Taiwan, 1988.
- 79. Fish Lecture, Brigham Young University, 1987.
- 80. Harry Lyman Hooker Distinguished Visiting Professor, McMaster University, 1987.
- 81. Leif Johansen Lecture, University of Oslo, 1986.
- 82. Abbott Lecturer, Colorado College, 1985.
- 83. Major Lecture, Australasian Econometric Society, Sydney, Australia, 1984.

Professional Experience

University College Dublin

Professor of Science and Society, 2005-

Peking University

Changjiang River Scholar Professor, 2004–2008

University College London

Distinguished Chair of Microeconometrics, 2004–2008

University of Chicago

Henry Schultz Distinguished Service Professor, 1995– Henry Schultz Professor, 1985–1995 Professor of Economics, 1977– Associate Professor, 1973–1977 (tenured, 1974) Irving Harris School of Public Policy, Affiliated Faculty 1990– Director, Center for Social Program Evaluation, Harris School of Public Policy 1991– Director, Economics Research Center

American Bar Foundation

Senior Fellow, 1991-

Yale University

A. Whitney Griswold Professor of Economics, 1988–1990 Professor of Statistics, 1990 Yale Law School Lecturer, 1989–1990 Alfred Cowles Distinguished Visiting Professor, Cowles Foundation, 2008–

National Bureau of Economic Research

Associate, 1971–1985, 1987– Research Fellow, 1972–1973

National Opinion Research Center

Research Associate, 1979

RAND Corporation

Consultant 1975–1976

Columbia University

Associate Professor 1973–1974 Assistant Professor, 1970–1973

New York University

Adjunct Assistant Professor, 1972 Council of Economic Advisors Junior Economist Advisors, 1967

Previous Positions

Martin-Marietta Aerospace Systems Engineer, 1965

Other Professional Activities

- 1. Director, Economic Research Center, Department of Economics, University of Chicago
- 2. Director, Center for Social Program Evaluation, Harris School of Public Policy, University of Chicago
- 3. Member, 1997 National Longitudinal Survey of Youth Advisory Panel, NORC, 2008–
- 4. Member, International Statistical Institute, 2007—
- 5. Editorial Board, Journal of Applied Econometrics, 2007–
- 6. President, Western Economics Association 2003 (Cycle: VP (2003–2004), President Elect (2004–2005), President (2005–2006))
- 7. Council, Econometric Society, 2000–2006
- 8. President, Midwest Economics Association, 1998.
- 9. Econometrics Reviews, Co-Editor; Associate Editor, 1987–
- 10. *Handbook of Econometrics* Vol. 5, Co-Editor with Ed Leamer
- 11. Handbook of Econometrics Vol. 6A, Co-Editor with Ed Leamer

- 12. Handbook of Econometrics Vol. 6B, Co-Editor with Ed Leamer
- 13. American Economics Association, Executive Committee Member, 2000–2003
- 14. Science, Technology and Economic Policy Board, National Research Council, Member 2000–
- 15. Evaluation Review, Associate Editor, 1991–1996
- 16. Journal of Economic Perspectives, Associate Editor, 1989–1996
- 17. Review of Economics and Statistics, Associate Editor, 1994–2002
- 18. Member, Advisory Board and Dean's Search Committee, School of Public Policy, University of Chicago, 1985–1988
- 19. Member, National Academy of Sciences Panel on the Status of Black Americans, 1985–1988
- 20. Journal of Labor Economics, Associate Editor, 1982-
- 21. Member, National Academy of Sciences Panel On Statistical Assessments as Evidence in the Courts, 1982–1985
- 22. Review of Economic Studies, Associate Editor, 1982–1985
- 23. Journal of Political Economy, Co-Editor, 1981–1987
- 24. Member, Board of Overseers, Michigan Panel Survey of Income Dynamics, 1981–1984
- 25. Journal of Econometrics, Editor of the Special Issue on Panel Data, 1981
- 26. Member, Advisory Board Chicago Urban League, 1980–1987
- 27. Academic Press Editor of Labor Economics Series, 1980–1984
- 28. Journal of Econometrics, Associate Editor, 1977–1983
- 29. National Science Foundation Evaluation Panel in Economics Member, 1977–1979
- 30. London School of Economics, Visitor, Spring 1977, Center for Research on the Economics of Education
- 31. University of Wisconsin Institute for Research on Poverty, Visiting Professor, Fall 1977
- 32. *Annals of Economics*, Editor of special issue on the Social Measurement Analysis of Discrete Data, 1976
- 33. Social Science Council Research Committee on Research Methods for Longitudinal Data, 1976–1979, 1981–1982

Students (Chair or co-chair of committee)

University of Chicago unless otherwise noted.

- 1. John Abowd
- 2. Ricardo Avelino
- 3. Alessandro Barbarino

- 4. Ricardo Barros
- 5. Herbert Baum
- 6. Andrea Beller (Columbia)
- 7. Christina Bellido
- 8. George Borjas (Columbia)
- 9. Stephen Cameron
- 10. Pedro Carneiro
- 11. Thomas Coleman
- 12. Robert Cotterman
- 13. Flavio Cunha
- 14. Marcello Dabos
- 15. Felipe Diniz
- 16. Christopher Flinn
- 17. Christina Gathmann
- 18. Eric Gould
- 19. Carolyn Heinrich (Harris School, University of Chicago)
- 20. Bo Honoré
- 21. Anjini Kochar
- 22. Siu Fai Leung
- 23. Martin Ljunge
- 24. Lance Lochner
- 25. Thomas MaCurdy
- 26. Grecia Maruffo
- 27. Mauricio Mazocco
- 28. Salvador Navarro
- 29. Randall Olsen
- 30. Larry Olson
- 31. Brook Payner
- 32. Carola Pessino
- 33. Heleno Pioner
- 34. Rebecca Roselius
- 35. Richard Robb

- 36. Russell Roberts
- 37. Anne Royalty
- 38. Daniel Santos
- 39. Robert Schmitz
- 40. Peter Schochet
- 41. Sam Schulhofer-Wohl
- 42. Jeff Smith
- 43. Rachel Soloveichik
- 44. Jora Stixrud
- 45. Chris Taber
- 46. Andrea Tiseno
- 47. Justin Tobias
- 48. Petra Todd
- 49. Grace Tsiang
- 50. Sergio Urzua
- 51. J. H. Verkerke
- 52. Edward Vytlacil
- 53. Jim Walker

Publications

Books

Longitudinal Analysis of Labor Market Data, Burton Singer (ed), Cambridge: Cambridge University Press, 1985.

Handbook of Econometrics, Vol 5 (with E. L. Leamer), New York: North-Holland, 2001.

Inequality in America: What Role for Human Capital Policy?, J. Heckman and A. Krueger, eds., Cambridge, MA: MIT Press, 2003.

Law and Employment: Lessons From Latin America and the Caribbean (with C. Pages), University of Chicago Press, For NBER, 2004.

Handbook of Econometrics, Vol 6A (with E. L. Leamer). Amsterdam: North-Holland, 2007.

Handbook of Econometrics, Vol 6B (with E. L. Leamer). Amsterdam: North-Holland, 2007.

Testing the Test: What the GED Reveals and Conceals, (with P. LaFontaine) Under preparation, Chicago: University of Chicago Press, 2008.

Book Reviews and Op-Ed Pieces

- 1. "Review of *Problems and Issues in Current Econometric Practices*," *Journal of Economic Literature*, (December, 1974).
- 2. "The Cracked Bell,' Review of Herrnstein and Murray, *The Bell Curve*," *Reason*, March, 1995.
- 3. "Catch 'em Young: Investing in Disadvantaged Young Children is Both Fair and Efficient," *Wall Street Journal*, January 10, 2006, p. A14.
- 4. "Comments on Are Protective Labor Market Institutions at the Root of Unemployment? A Critical Review of the Evidence by David Howell, Dean Baker, Andrew Glyn and John Schmidt." Capitalism and Society, 2(1, Article 5, 2007).

Journal Articles

- 1. "A Note on Second Best Conditions for Public Goods," (with R. Nelson), *Public Finance*, 1, (1972).
- 2. "Empirical Evidence on the Functional Form of the Earnings-Schooling Relationship," (with S. Polachek), *Journal of the American Statistical Association*, (June 1974), 69(346), 350-354. Also, NBER, mimeo (October 1972).
- 3. "The Estimation of Income and Substitution Effects in a Model of Family Labor Supply," (with O. Ashenfelter), *Econometrica*, (January 1974), 42(1), 73-86. Presented at the Econometric Society Winter Meetings, (1971).
- 4. "Shadow Prices, Market Wages and Labor Supply," *Econometrica*, (July 1974) 42(4): 679–94.
- 5. "The Effect of Day Care Programs on Women's Work Effort," *Journal of Political Economy*, (March/April 1974). Reprinted in T.W. Schultz (ed.), *Economics of the Family: Marriage*, *Children*, *and Human Capital*, (University of Chicago Press, 1974), 491-518.
- 6. "Life Cycle Consumption and Labor Supply: An Explanation of the Relationship Between Income and Consumption over the Life Cycle," *American Economic Review*, (March 1974).
- 7. "A Stochastic Model of Reproduction: An Econometric Approach," (with R. Willis), *Papers and Proceedings of the American Statistical Association*, Social Statistics Section, 1974.
- 8. "Estimating Labor Supply Functions," (with O. Ashenfelter), in G. Cain and H. Watts (eds.), *Labor Supply and Income Maintenance*, (Chicago: Markham Publishing Company, 1974).
- 9. "Measuring the Effect of an Antidiscrimination Program," (with O. Ashenfelter), July 1974 mimeo, in *Evaluating The Labor Market Effects of Social Programs*, (Princeton, N.J.: Princeton University Press, 1975). Presented at the American Economic Association Winter Meetings, 1972.
- 10. "Estimation of a Stochastic Model of Reproduction: An Econometric Approach," (with R. Willis), in N. Terleckyj (ed.), *Household Production and Consumption*, 40, 99-145, (New York: Columbia University Press, 1976). Presented at the Conference on Research in Income and Wealth, Washington, D.C., November 1973.

- 11. "Simultaneous Equation Models with both Continuous and Discrete Endogenous Variables With and Without Structural Shift in the Equations," in Goldfeld and Quandt (eds.), *Studies in Nonlinear Estimation*, Ballinger, (1976).
- 12. "A Life Cycle Model of Earnings, Learning and Consumption," *Journal of Political Economy*, (August 1976), 84(2), pt. 2, S11-S44.
- 13. "Does The Contract Compliance Program Work?: An Analysis of Chicago Data," (with K. Wolpin), *Industrial and Labor Relations Review*, (Summer 1976). Presented at a Symposium on the Effect of the Office of Federal Contract Compliance on Minority Status, Cornell University, May 1975.
- 14. "The Common Structure of Statistical Models of Truncation, Sample Selection and Limited Dependent Variables," *Annals of Economic and Social Measurement*, (December 1976).
- 15. "Introduction," *Annals of Economic and Social Measurement*, Special issue on Discrete, Qualitative and Limited Dependent Variables, (December, 1976).
- 16. "New Evidence on the Dynamics of Female Labor Supply," in E. Andrews and C. Lloyd (eds.), *Women in the Labor Market*. Columbia University Press, 1978. Presented at a Labor Department Conference, "Women in the Labor Market," Columbia University, September 1977.
- 17. "A Partial Survey of Recent Research on the Labor Supply of Women," *AEA Papers and Proceedings*, (May 1978). Invited paper, presented to the American Economic Association, New York, 1977.
- 18. "An Economic Analysis of the Contract Compliance Program," *Essay in Labor Market Analysis and Economic Demography in Memory of Peter Comay*, (Halstead, 1977).
- 19. "The Impact of the Government on the Labor Market Status of Black Americans: A Critical Review," (with R. Butler), in L. Hausman, (ed), *Equal Rights and Industrial Relations*, Madison, Wisconsin: Industrial Relations Research Association, Ch. 9.
- 20. "A Beta-Logistic Model For the Analysis of Sequential Labor Force Participation by Married Women," (with R. Willis), *Journal of Political Economy*, (February 1977), 85(1), 27-58, read at the Third World Econometric Society Meetings, Toronto, 1975.
- 21. "Comments on 'The Labor Supply Responses of Wage Earnings in the Rural Negative Income Experiment," in J. Palmer and J. Pechman (eds), *The Labor Supply Responses of Wage Earners in Welfare in Rural Areas: The North Carolina-Iowa Maintenance Experiment*, Brookings, 1977, Presented at the Brookings Conference on Evaluating the Results of the Rural Negative Income Tax Experiment, Washington, D.C., (January, 1977).
- 22. "Dummy Endogenous Variables in a Simultaneous Equation System," *Econometrica*, (July 1978). Original draft, April 1973. Final draft, April 1977, 46(4), 931-959.
- 23. "Labor Supply Estimates for Public Policy Evaluation," (with G. Borjas), *Proceedings of The Industrial and Labor Relations Research Association*, Chicago meetings, 1978.
- 24. "Simple Statistical Models for Discrete Panel Data Developed and Applied to Test the Hypothesis of True State Dependence Against The Hypothesis of Spurious State Dependence," *Annals de INSEE*, Paris, (1978), 227-269, (September, Special Issue).

- 25. "Sample Selection Bias as a Specification Error," *Econometrica*, (February 1979), 47(1), 153-161.
- 26. "Reply to Mincer and Ofek," (with R. Willis), *Journal of Political Economy*, (February 1979).
- 27. "Sample Selection Bias as a Specification Error with an Application to the Estimation of Labor Supply Functions," March, 1977 in J. Smith (ed.), *Female Labor Supply: Theory and Estimation*, (Princeton University Press, 1980).
- 28. "Addendum To Sample Selection Bias As A Specification Error," in E. Stromsdorfer and G. Farkas, *Evaluation Studies Review Annual*, Vol. 5, (Sage Publications, 1980), 69-74.
- 29. "Does Unemployment Cause Future Unemployment? Definitions, Questions and Answers from a Continuous Time Model of Heterogeneity and State Dependence," (with G. Borjas). Special Symposium issue on Unemployment, *Economica*, (May 1980).
- 30. "A Life Cycle Model of Female Labour Supply," (with T. MaCurdy), *Review of Economic Studies*, 1980, XLVII, 47-74.
- 31. "A Life Cycle Model of Family Labor Supply," in B. Weisbrod and H.Hughes (eds), *Human Resource, Employment and Development, Proceedings of Sixth World Congress*, (IEA, McMillan, 1983).
- 32. "Statistical Models for Discrete Panel Data," in C. Manski and D. McFadden (eds.), *Structural Analysis of Discrete Data With Econometric Applications*, (M.I.T. Press).
- 33. "The Incidental Parameters Problem and the Problem of Initial Conditions in Estimating a Discrete Time-Discrete Data Stochastic Process and Some Monte Carlo Evidence," read at the National Bureau of Economic Research Conference on Panel Data, Harvard University, (August 1978). In C.Manski and D. McFadden (eds.), *Structural Analysis of Discrete Data With Econometric Applications*, (M.I.T. Press), (originally scheduled for 1979; due to delays, published in 1981).
- 34. "Heterogeneity and State Dependence," in S. Rosen (ed.), *Studies in Labor Markets*, (University of Chicago Press, 1981), 91-139.
- 35. "Current Theoretical and Empirical Studies of Labor Supply: Second Generation Studies," (with T. MaCurdy), *Research in Labor Economics*, (JAI Press Inc., 1981).
- 36. "Recent Theoretical and Empirical Studies of Labor Supply: A Partial Survey," with M. Killingsworth and T. MaCurdy, presented at Oxford, 1979, in Z. Hornstein (ed), *Studies of The Labor Market*, HMS Treasury, (1981).
- 37. "The Impact of the Minimum Wage on the Employment and Earnings of Workers in South Carolina," (with Sedlacek), in Vol. 5, *Report of the Minimum Wage Study Commission*, U.S. Government Printing Office, 225-272, (June 1981).
- 38. "Models for the Analysis of Labor Force Dynamics," (with C. Flinn), *Advances in Econometrics*, 1, 35-95, (New York: JAI Press, 1982).
- 39. "The Identification Problem in Econometric Models for Duration Data," in W. Hildenbrand (ed), *Advances in Econometrics, Proceedings of Fourth World Congress of Econometric Society*, (Cambridge University Press, 1982).

- 40. "Earnings and The Distribution of Income," (with R. Michael), in *Part II, Behavioral and Social Science Research, A National Resource*, (National Academy of Science Press, 1982).
- 41. "New Methods For Analyzing Individual Event Histories," (with C. Flinn), *Sociological Methodology*, 99-140, (Josey-Bass, 1982).
- 42. "New Methods for Analyzing Structural Models of Labor Force Dynamics," (with C. Flinn), *Journal of Econometrics*, 18 (1982): 115-68.
- 43. "Are Unemployment and out of the Labor Force Behaviorally Distinct Labor Force States?," (with C. Flinn), *Journal of Labor Economics*, 28-42, (January, 1983).
- 44. "The Likelihood Function For The Multistate-Multiepisode Model in 'Models For The Analysis of Labor Force Dynamics'," (with C. Flinn), in R. Bassman and G. Rhodes, (eds), *Advances in Econometrics*, 2, 225-231, (1983).
- 45. "Natural Monopoly," (with D. Evans), in D. Evans (ed.), *Breaking Up Bell: Essays on Industrial Organization and Regulation*, 127-156, (North Holland, 1983).
- 46. "Multiproduct Cost Function Estimates and Natural Monopoly Tests for the Bell System," (with D. Evans), in D. Evans, (ed.), *Breaking Up Bell: Essays on Industrial Organization and Regulation*, Chapter 10, 253-282, (North Holland, 1983).
- 47. "A Method for Minimizing the Impact of Distributional Assumption in Econometric Models for Duration Data," (with B. Singer), *Econometrica*, **52**(2): 271-320 (1984).
- 48. "The Identifiability of the Proportional Hazard Model," (with B. Singer), *Review of Economic Studies*, 231-241, (April, 1984).
- 49. "Population Heterogeneity in Demographic Models," (with B. Singer), in A. Rodgers and K. Land (eds.), *Multidimensional Mathematical Demography*, (1984), 271-320.
- 50. "Comments on the Ashenfelter and Kydland Papers," *Carnegie Rochester Conference Series on Public Policy*, (1984), 209-224.
- 51. "Econometric Duration Analysis," (with B. Singer), *Journal of Econometrics*, (January, 1984), 63-132.
- 52. "The χ^2 Goodness of Fit Statistic For Models with Parameters Estimated From Microdata," *Econometrica*, (November, 1984), 52(6), 1543-1547.
- 53. "A Test for Subadditivity of the Cost Function With An Application to the U.S. Bell System," (with D. Evans), *American Economic Review*, (September, 1984), 615-623.
- 54. "Introduction," (with B. Singer), *Longitudinal Analysis of Labor Market Data*, (Cambridge: Cambridge University Press, 1985).
- 55. "Social Science Duration Analysis," (with B. Singer), *Longitudinal Analysis of Labor Market Data*, (University Press, 1985).
- 56. "A Simultaneous Equations Linear Probability Model," (with T. MaCurdy), *Canadian Journal of Economics*, (January, 1985), XVIII(1), 28-37.
- 57. "Alternative Methods for Estimating The Impact of Interventions," (with R. Robb), presented at Social Science Research Council Conference, Mt. Kisco, N.Y., October, 1978. In J.

- Heckman and B. Singer (eds.), *Longitudinal Analysis of Labor Market Data*, (Cambridge University Press, 1985).
- 58. "Alternative Methods for Evaluating the Impact of Interventions: An Overview," (with R. Robb), *Journal of Econometrics*, **30**(1-2): 239-267. (1985).
- 59. "New Evidence on the Timing and Spacing of Births," (with J. Hotz and J. Walker), *American Economic Review*, (May, 1985), 179-184.
- 60. "Using Longitudinal Data to Estimate Age, Period and Cohort Effects in Earnings Equations," (with R. Robb), in William M. Mason and Stephen E. Fienberg, (ed), *Cohort Analysis in Social Research Beyond the Identification Problem*, (Springer-Verlag New York Inc., 1985).
- 61. "Heterogeneity, Aggregation and Market Wage Functions: An Empirical Model of Self-Selection in the Labor Market," (with G. Sedlacek), *Journal of Political Economy*, (December, 1985), 93(6), 1077-1125.
- 62. "The Influence of Early Fertility and Subsequent Births And The Importance of Controlling For Unobserved Heterogeneity," (with J. Hotz and Jim Walker), *Bulletin of The International Statistical Institute*, (1985), 51(2).
- 63. "A Dynamic Model of Aggregate Output Supply, Factor Demand and Entry and Exit For A Competitive Industry with Heterogeneous Plants," (with V. K. Chetty), *Journal of Econometrics*, (1986), 33, No.1/2, 237-262.
- 64. "Labor Econometrics," (with T. MaCurdy), in Z. Griliches and M.D. Intriligator (ed), *Handbook of Econometrics, Vol. 3*, Chapter 3, (Elsevier Science Publishers), (1986), 1918-1977.
- 65. "Econometric Analysis of Longitudinal Data," (with B. Singer), in Z. Griliches and M.D. Intriligator (ed), *Handbook of Econometrics, Vol. 3*, Chapter 29, (Elsevier Science Publishers), (1986), 1690-1763.
- 66. "Alternative Methods For Solving The Problem of Selection Bias in Evaluating The Impact of Treatments on Outcomes," (with R. Robb) in Howard Wainer, (ed), *Drawing Inference From Self Selected Samples*, (Springer-Verlag), (1986), 63-107.
- 67. "The Earnings of Panamanian Males," (with J. Hotz), *Journal of Human Resources*, September, 1986.
- 68. "Alternative Identifying Assumptions in Econometric Models of Selection Bias," (with R. Robb), in G. Rhodes, (ed), *Advances in Econometrics*, Vol. 5, 243-287, (JAI Press, 1986).
- 69. "The Importance of Bundling in a Gorman-Lancaster Model of Earnings," *Review of Economic Studies*, (1987) (with J. Scheinkman), LIV, 243-255.
- 70. "Female Labor Supply: A Survey," (with M. Killingsworth), Chapter 2, in O. Ashenfelter and R. Layard, *Handbook of Labor Economics*, (ed.), (North Holland, 1987).
- 71. "Using Goodness of Fit and Other Criteria to Choose Among Competing Duration Models: A Case Study of Hutterite Data," (with J. Walker), *Sociological Methodology*, (1987), Chapter 9, 248-307.

- 72. "Selection Bias and The Economics of Self Selection," *The New Palgrave: A Dictionary of Economics*, (MacMillan Press, Stockton, New York), 287-296.
- 73. "Do We Need Experimental Data To Evaluate The Impact of Training on Earnings," (with J. Hotz and M. Dabos), *Evaluation Review*, (August 1987), 28(4), 397-427.
- 74. "Are Classical Experiments Necessary For Evaluating The Impact of Manpower Training Programs?: A Critical Assessment," with (J. Hotz and M. Dabos), *Industrial Relations Research Association: Proceedings Of The Annual Meeting*, (1987), 40, 291-302.
- 75. "Empirical Tests of Labor Market Equilibrium: A Microeconomic Perspective," *Carnegie-Rochester Conference Series on Public Policy*, (with T. MaCurdy), 28, (Spring 1988), 231-258.
- 76. "Time Constraints and Household Demand Functions," in T. P. Schultz, (ed.), *Research in Population Economics*, (1988).
- 77. "Natural Monopoly and The Bell System: A Response to Charnes, Cooper and Sueyoshi," (with D. Evans), *Management Science*, (January, 1988), 27-38.
- 78. "The Value of Longitudinal Data For Evaluating The Impact of Treatments on Outcomes," (with R. Robb) in G. Duncan and G. Kalton, (eds.), *Panel Surveys*, (Wiley: New York, 1988), 512-538.
- 79. "The Impact of the Economy and the State on the Economic Status of Blacks: A Study of South Carolina," (with R. Butler and B. Payner) in D. Galenson, (ed.), *Markets and Institutions*, (Cambridge: Cambridge University Press, 1989), 321-343.
- 80. "How Voluntary is Black Unemployment and Black Labor Force Withdrawal?" in W. Darity and S. Schulman, (eds), *The Question of Discrimination: Racial Inequality in the U.S. Labor Market*, (Connecticut: Wesleyan University Press, 1989), 50-80.
- 81. "Determining The Impact of Federal Anti-discrimination Policy on The Economic Status of Blacks: A Study of South Carolina," (with B. Payner), *American Economic Review*, (March 1989), 79(1), 138-177.
- 82. "Affirmative Action and Black Employment," *Proceedings Of The Industrial Relations Research Association*, (1989), 41, 320-329.
- 83. "The Identifiability Of The Competing Risks Model," (with Bo Honoré), *Biometrika*, (June 1989), 76(2), 325-30.
- 84. "Choosing Among Alternative Non-experimental Methods For Estimating The Impact of Social Programs: The Case of Manpower Training," (with V. J. Hotz). Symposium paper with invited discussion, featured invited paper, American Statistical Association meeting, *Journal of the American Statistical Association*, (December 1989), 84(408), 862-874.
- 85. "Forecasting Aggregate Period Specific Birth Rates: Time Series Properties of a Microdynamic Neoclassical Model of Fertility," (with J.Walker), *Journal of The American Statistical Association*, (December, 1989), 84(408), 958-965.
- 86. "The Empirical Content of the Roy Model," with Bo Honore, *Econometrica*, (September, 1990), 58(5), 1121-1149.

- 87. "Self Selection and The Distribution of Hourly Wage Rates," with (G. Sedlacek), *Journal of Labor Economics*, (January 1990), 8(1), Part 2, S329-S363.
- 88. "Causal Inference and Nonrandom Samples," *Symposium on Selection Bias Models, Journal of Educational Statistics*, 14(2), (Summer 1989), 159-168, reprinted in J. Schaeffer, (ed.), *The Role of Models in Non-experimental Social Science: Two Debates*, 1991.
- 89. "The Third Birth in Sweden," (with J. Walker), *Journal of Population Economics*, (1990), 3(4), 235-275.
- 90. "A Method of Moments Estimator for The Mixing Distribution of a Mixture of Exponentials Model and A Mixture of Geometrics Model," presented at IC2 Conference, Durham, N.C., (May 1988), in W. Barnett, J. Powell and G. Tauchen, (eds.), *Nonparametric Estimation of Econometric Models*, (Cambridge: Cambridge University, 1990).
- 91. "Estimating Fecundability from Data on Waiting Times to First Conceptions," (with J. Walker), *The Journal of the American Statistical Association*, (June, 1990), 85(410), 283-294.
- 92. "The Relationship Between Wages and Income and the Timing and Spacing of Births: Evidence from Swedish Longitudinal Data," (with J. Walker), *Econometrica*, (November, 1990), 58(6), 235-275.
- 93. "A Nonparametric Method of Moments Estimator for the Mixture of Geometrics Model," in J. Hartog, et. al., *Panel Data and Labor Market Studies*, (North Holland, 1990).
- 94. "Economic Models of Fertility Dynamics: A Study of Swedish Fertility," (with J. Walker), in T. P. Schultz, (ed.), *Research in Population Economics*, (Greenwich, CT: JAI Press, 1990), Vol. 7, 3-91.
- 95. "Testing The Mixture of Exponentials Hypothesis and Estimating The Mixing Distribution by the Method of Moments," (with R. Robb and J. Walker), *Journal of The American Statistical Association*, (June 1990), 85(410), 582-589.
- 96. "The Impact of The Great Society on Social Science," *Journal of Human Resources*, (Spring, 1990), 25(2), 297-304.
- 97. "Understanding The Economic Progress of Black Americans," in *Business in the Contempo-* rary World, (Summer 1990), 19-22.
- 98. "The Central Role of the South in Accounting For The Economic Progress of Black Americans," *Papers and Proceedings Of The American Economic Association*, (May 1990), 80(2), 242-246.
- 99. "Varieties of Selection Bias," American Economic Review, (May 1990), 80(2), 313-318.
- 100. "Racial Disparity and Employment Discrimination Law: An Economic Perspective" and "Rejoinder," (with R. Verkerke), *Yale Law and Policy Review*, (Summer 1990), 8(2), 276-298.
- 101. "Accounting for the Economic Progress of Black Americans," in R. Cornwall and P.V. Wunnava, (eds.), *New Approaches to Economics and Social Analyses of Discrimination*, New York: Praeger, (1991), 331-337.

- 102. "Continuous vs. Episodic Change: The Impact of Affirmative Action and Civil Rights Policy on the Economic Status of Blacks," (with J.Donohue), *Journal of Economic Literature*, (December 1991), 29(4), 1603-1643.
- 103. "Reevaluating Federal Civil Rights Policy," (with J. Donohue), *Georgetown Law Journal*, (1991).
- 104. "Identifying the Hand Of The Past: Distinguishing State Dependence from Heterogeneity," *American Economic Review*, (May, 1991), 81(2), 75-79.
- 105. "A Nonparametric Method of Moments Estimator for the Mixtures of Exponentials Model and the Mixture of Geometrics Model," in W. Barnett, J. Powell and G. Tauchen, (eds.), *Nonparametric and Semiparametric Methods in Econometrics and Statistics*, (Cambridge University Press, 1991)
- 106. "Randomization and Social Policy Evaluation," paper presented at Institute For Research on Poverty conference at Arlie House in Charles Manski and Irwin Garfinkel, (eds.), *Evaluating Welfare and Training Programs*, (Harvard University Press, 1992), 201-230.
- 107. "Understanding Third Births in Sweden," in J. Trussell, R. Hankinson and J. Tilton, (eds.), *Demographic Applications of Event History Analysis*, (Oxford University Press, 1992).
- 108. "Haavelmo and the Birth of Modern Econometrics: A Review of The History of Econometric Ideas by Mary Morgan," *Journal of Economic Literature*, (June 1992), Vol. 30.
- 109. "Evaluating an Argument For Affirmative Action," (with T. Philipson), *Rationality and Society*, (July 1992).
- 110. "The Urban Institute Audit Studies: Their Methods and Findings," (with P. Siegelman), in M. Fix and R. Struyk, (eds.), *Clear and Convincing Evidence: Measurement of Discrimination in America*, Chapter 5, 187-258, (Urban Institute, Fall 1993).
- 111. "The Nonequivalence of High School Equivalents," (with S. Cameron), *Journal of Labor Economics*, (January 1993), 11(1), 1-47.
- 112. "Determinants of Young Male Schooling and Training Choices," in Lisa Lynch, (ed), *Private Sector Skill Formation: International Comparisons*, (Chicago: University of Chicago Press, 1993). 201-231.
- 113. "What Has Been Learned About Labor Supply In The Past Twenty Years?," *AEA Papers and Proceedings*, (May 1993), 83(2), 116-121.
- 114. "Assessing The Case For Randomized Evaluation of Social Programs," in K. Jensen and P. Madsen, (eds), *Measuring Labor Market Program: Evaluating The Effects of Active Labor Market Initiatives*, Ministry of Labor, (Copenhagen, DK., May 1993).
- 115. "Is Job Training Oversold?," *The Public Interest*, (Spring 1994), Number 115, 91-115.
- 116. "Econometric Mixture Models and More General Models for Unobservables," (with C. Taber), *Statistical Methods in Medical Research: Frailty Models in Survival Analysis*, (1994), 3(3), 279-299.
- 117. "U. S. Education and Training Policy: A Reevaluation of The Underlying Assumptions Behind The New Consensus," (with J. Smith and R. Roselius), in A. Levenson and L. C.

- Solmon, (eds), *Labor Markets, Employment Policy and Job Creation*, (Santa Monica, CA: Milken Institute for Job and Capital Formation), (October 1994), 83-121.
- 118. "Assessing The Case For Randomized Social Experiments," (with J. Smith), *Journal of Economic Perspectives*, (Spring 1995), 9(2), 85-110.
- 119. "The Economics of Eligibility Rules for a Social Program: A Study of the Job Training Partnership Act A Summary Report," (with T. Devine), *Canadian Journal of Economics*, (1995).
- 120. "Lessons From The Bell Curve," *Journal of Political Economy*, (October 1995), 103(5), 1091-1120.
- 121. "Coleman's Contribution to Education: Theory and Research Styles and Empirical Research," (with D. Neal), in Jon Clark, (ed), *The Contributions of James Coleman: Falmer Sociology Series*, (Falmer Press: London/N.Y., Philadelphia), (1996), 81-102.
- 122. "Does Measured School Quality Really Matter? An Examination of the Earnings-Quality Relationship," (with A. Layne-Farrar and Petra Todd), in G. Burtless, (ed), *Does Money Matter? The Effect of School Resources on Student Achievement and Success*, (Brookings), (July 1996).
- 123. "Randomization As An Instrumental Variable," *Review of Economics and Statistics*, (May 1996), LXXVIII, 336-341.
- 124. "Experimental and Non-experimental Evaluation," (with J. Smith), in G. Schmid, (ed.), *International Handbook of Labor Market Policy and Evaluation*, (Elgar Publishing Company, 1996).
- 125. "What Do Bureaucrats Do? The Effects of Performance Standards and Bureaucratic Preferences on Acceptance Into the JTPA Program," (with J. Smith and C. Taber), in G. Libecap, (ed.), *Advances in the Study of Entrepreneurship, Innovation and Growth*, Vol. 7, 191-217, (JAI Press, 1996).
- 126. "Human Capital Pricing Equations with an Application to Estimating the Effect of Schooling Quality on Earnings," with (A. Layne-Farrar and P. Todd), *Review of Economics and Statistics*, (November 1996), 562-610.
- 127. "Consequences of Eligibility Rules for A Social Program: A Study of the Job Training Partnership Act (JTPA)," (with T. Devine), in S. Polachek, *Research in Labor Economics*, (JAI Press, 1996), 15, 111-170.
- 128. "What Should be our Human Capital Investment Policy?," in G. Mangum, *Of Heart and Mind*, (Upjohn, 1996), 323-342.
- 129. "Social Experiments: Theory and Evidence," (with J. Smith), *Okonomie and Gesellschaft*, Jahrbuch, 13, (1996), 186-214.
- 130. "Sources of Selection Bias in Evaluating Programs: An Interpretation of Conventional Measures and Evidence on The Effectiveness of Matching as a Program Evaluation Method," (with H. Ichimura, J. Smith and P. Todd), *Proceedings of the National Academy of Sciences*, (November 1996), 93, 13416-13420.

- 131. "On Air: Identification of Causal Effects Using Instrumental Variables," *Journal of The American Statistical Association*, (June 1996).
- 132. "The Empirical Foundations of Calibration," (with Lars Hansen), *Journal of Economic Perspectives*, 10(1), (Winter 1996), 87-104.
- 133. "Linear Probability Models of the Demand for Attributes with an Empirical Application to Estimating The Preferences of Legislators," (with J. Snyder), *RAND Journal of Economics*, (1997), 28(0), S142-S189.
- 134. "Assessing the Performance of Performance Standards in Public Bureaucracies," (with C. Heinrich and J. Smith), *AEA Papers and Proceedings*, (May 1997), 389-395.
- 135. "Cognitive Ability, Wages, and Meritocracy," (with John Cawley, Karen Conneely and Ed Vytlacil)," in B. Devlin, S. E. Fienberg, D. Resnick and K. Roeder, (eds), in *Intelligence Genes, and Success: Scientists Respond to the Bell Curve*, 179-192, (Copernicus:Springer-Verlag, 1997).
- 136. "The Value of Quantitative Evidence on the Effect of the Past on the Present," *AEA Papers and Proceedings*, (May 1997), 87(2), 404-408.
- 137. "Intellectual Roots of the Law and Economics Movement," *Law and History Review*, (Fall 1997), 15(2), 327-332.
- 138. "The Effects of Government Policy on Human Capital Investment and Wage Inequality," (with L. Lochner, J. Smith, C. Taber), *Chicago Policy Review*, (Spring 1997), 1(2), 1-40.
- 139. "Instrumental Variables: A Study of Implicit Behavioral Assumptions Used in Making Program Evaluations," *Journal of Human Resources*, (Summer 1997), 32(3), 441-462
- 140. "Making The Most Out of Programme Evaluations and Social Experiments: Accounting For Heterogeneity in Programme Impacts," (with J. Smith, N. Clements), (March 1993), *Review of Economic Studies*, (October 1997), 64, 487-535.
- 141. "Characterizing Selection Bias Using Experimental Data," (with H. Ichimura, J. Smith and P. Todd), *Econometrica*, 1998, 66(5): 1017-1098.
- 142. "Matching As An Econometric Evaluation Estimator: Evidence from Evaluating a Job Training Programme," (with H. Ichimura and P. Todd), *Review of Economic Studies*, (October 1997), 64, 605-654.
- 143. "Accounting For Dropouts in the Evaluation of Social Experiments," (with J. Smith and C. Taber), *Review of Economics and Statistics*, (February 1998), 80(1), 1-14.
- 144. "The Effects of Government Policies on Human Capital Investment, Unemployment and Earnings Inequality," in *Publications of the GAAC, Symposia, Volume 5: Third Public GAAC Symposium Labor Markets in the USA and Germany*, German-American Academic Council Foundation, Bonn, Germany, (1998).
- 145. "The Sensitivity of Experimental Impact Estimates: Evidence From The JTPA Study," (with J. Smith), in R. Freeman, (ed), *Youth Unemployment*, August, 1993, revised, May, 1996 and presented at a conference on Youth Transitions, Konstanz, Germany, University of Chicago and NBER, 1998.

- 146. "Evaluating The Welfare State," (with J. Smith), in S. Strom (ed.), *Econometrics and Economic Theory in the 20th Century: The Ragnar Frisch Centennial Symposium, Econometric Society Monograph Series*, 16, (Cambridge University Press, 1998), Chapter 8, 241-318.
- 147. "General Equilibrium Treatment Effects: A Study of Tuition Policy," (with L. Lochner and C. Taber), *American Economic Review*, (May 1998), 88(2), 381-386.
- 148. "Tax Policy and Human Capital Formation," (with L. Lochner and C. Taber), *American Economic Review*, (May 1998), 88(2), 293-297.
- 149. "Life Cycle Schooling and Dynamic Selection Bias: Models and Evidence for Five Cohorts of American Males," (with S. Cameron), *Journal of Political Economy*, (April 1998), 106(2), 262-311.
- 150. "Explaining Rising Wage Inequality: Explorations With A Dynamic General Equilibrium Model of Earnings," (with L. Lochner and C. Taber), *Review of Economic Dynamics*, (1998), 1, 1-58.
- 151. "Human Capital Policy," (with Peter Klenow), in M. Boskin, (ed), *Capital Formation*, Hoover Economic Growth Conference, Hoover Institution, (1998).
- 152. "Detecting Discrimination," Journal of Economic Perspectives, (Spring 1998), 12(2).
- 153. "What Should Be Our Human Capital Investment Policy?," *Fiscal Studies*, 19(2), (Spring 1998).
- 154. "Instrumental Variables Methods For the Correlated Random Coefficient Model: Estimating The Average Rate of Return to Schooling When the Return Is Correlated With Schooling," (with E. Vytlacil), *Journal of Human Resources*, 33(4), (Fall 1998), 974-1002.
- 155. "Human Capital Formation and General Equilibrium Treatment Effects: A Study of Tax and Tuition Policy," (L. Lochner and C. Taber), *Fiscal Studies*, 20(1), 25-40, (March 1999).
- 156. "Doing it Right: Job Training and Education," *The Public Interest*, 135, (Spring 1999)
- 157. "Meritocracy in America: An Examination of Wages Within and Across Occupations," (with J. Cawley, and E. Vytlacil), *Industrial Relations*, 38(3), 250-296, (1999) Also published as National Bureau of Economic Research Working Paper #63
- 158. "Should College Attendance be Further Subsidized to Reduce Rising Wage Inequality?" (with Stephen Cameron) in M. Kosters, (ed), Financing College *Tuition: Government Policies and Educational Priorities*, (AEI: Washington, DC., 1999).
- 159. "The Economics and Econometrics of Active Labor Market Programs," (with R. LaLonde and J. Smith) in O. Ashenfelter and D. Card, (eds), *Handbook of Labor Economics*, (North Holland, Vol. 3, 1999), 1865-2086.
- 160. "Local Instrumental Variables and Latent Variable Models for Identifying an Bounding Treatment Effects," with (Edward Vytlacil), *Proceedings of the National Academy of Sciences*, (April 1999), 96, 4730-4734.
- 161. "The Pre-Programme Earnings Dip and the Determinants of Participation in A Social Programme Implications For Simple Programme Evaluation Strategies," (with Jeffrey A. Smith),

- *Economic Journal*, 109, 1-37, (July 1999), Won Prize as Best Paper Published in the journal in 1999.
- 162. "On Policies to Reward the Value Added by Educators," (with J. Cawley and E. Vytlacil), *Review of Economics and Statistics*, (November 1999), 81(4), 720-728.
- 163. "Micro Data and General Equilibrium Models," (with M. Browning and L. Hansen) in J. Taylor and M. Woodford (eds), *Handbook of Macroeconomics*, (Amsterdam: Elsevier. 1999), Chapter 8, 543-633.
- 164. "Understanding the Role of Cognitive Ability in Accounting For The Recent Rise In The Economic Return to Education," (with J. Cawley, L. Lochner and E. Vytlacil) in K. Arrow, S. Bowles, and S. Durlauf (eds.), *Meritocracy and Economic Inequality*, (Princeton University Press: Princeton, NJ, 1999).
- 165. "General Equilibrium Cost Benefit Analysis of Education and Tax Policies," (with L. Lochner and C. Taber), in Gustav Ranis and Lakshmi K. Raut, (ed), *Trade, Growth and Development: Essays in Honor of T.N Srinivasan*, Chapter 14, (Elsevier Science, B.V., Amsterdam, 2000), 291-393.
- 166. "Causal Parameters and Policy Analysis In Economics: A Twentieth Century Retrospective," *Quarterly Journal of Economics*, (2000), 45-97.
- 167. "The Relationship Between Treatment Parameters within a Latent Variable Framework," with (E. Vytlacil), *Economic Letters*, (January 2000), 66(1), 33-39.
- 168. "Substitution and Dropout Bias in Social Experiments: A Study of an Influential Social Experiment," with Neil Hohmann, Michael Khoo and Jeffrey Smith, *Quarterly Journal of Economics*, (May 2000), 651-690.
- 169. "Local Instrumental Variables," (with E. Vytlacil), in *Nonlinear Statistical Inference: Essays in Honor of Takeshi Amemiya*, C. Hsiao, K. Morimune, and J. Powell, (eds.), *Essays in Nonlinear Econometrics*, (Cambridge: Cambridge University Press), (2000).
- 170. "Rethinking Myths about Education and Training: Understanding the Sources of Skill Formation in a Modern Economy," (with L. Lochner) in S.Danzinger and J. Waldfogel, (eds.), *Securing the Future: Investing in Children from Birth to College*, Chapter 2, 47-83, (New York: Russell Sage Foundation, 2000).
- 171. "Policies to Foster Human Capital," (with Discussion), *Research in Economics*, (2000), 54(1), 3-56.
- 172. "Understanding Black-White Wage Differentials 1960-1990," (with T. Lyons and P. Todd), *American Economic Review*, (May 2000).
- 173. "The Cost of Job Security Regulation: Evidence from the Latin American Labor Markets, (with Carmen Pages-Serra), *Journal of the Latin American and Caribbean Economic Association*, 1(1), (Fall 2000), 109-154.
- 174. "Accounting for Heterogeneity, Diversity and Social Policy Evaluation," *Economic Journal*, (2001).

- 175. "Identifying The Role of Cognitive Ability in Explaining The Level of and Change In the Return to Education," (with E. Vytlacil), *Review of Economics and Statistics*, (February, 2001), 83(1),1-12.
- 176. "The Dynamics of Educational Attainment for Blacks, Whites and Hispanics," (with S. Cameron), *Journal of Political Economy*, (June 2001), 109(3), 455-499.
- 177. "Instrumental Variables, Selection Models, and Tight Bounds on the Average Treatment Effect," (with E. Vytlacil) in *Econometric Evaluations of Active Labor Market Policies in Europe*, edited by M. Lechner and F. Pfeiffer, (2001).
- 178. "Essays: Econometrics and Empirical Economics," *Journal of Econometrics*, (2001), 100(3-5).
- 179. "Policy Relevant Treatment Effects," (with E. Vytlacil) *American Economic Review*, 91(2), (2001), 107-111.
- 180. "The Importance of Noncognitive Skills: Lessons from the GED Testing Program," (with Y. Rubinstein), *AEA Papers and Proceedings*, (May, 2001).
- 181. "Four Parameters of Interest in the Evaluation of Social Programs," (with J.L. Tobias and E. Vytlacil), *Southern Economic Journal*, (2001), 68 (2), 210-223.
- 182. "Micro Data, Heterogeneity, and the Evaluation of Public Policy: Nobel Lecture", *Journal of Political Economy*, (2001) 109(4), 673-748.
- 183. "Removing the Veil of Ignorance in Accessing the Distributional Impacts of Social Policies," (with Pedro Carneiro and Karsten Hansen), *Swedish Policy Review*, Vol 8, (2001).
- 184. "Three Observations on Wages and Measured Cognitive Ability," (with John Cawley and Edward Vytlacil) *Labour Economics*, 2001.
- 185. "Flessibilità, Creazione del Lavoro e Globalizzazione: Il Caso Italia," *Global and Local Economic Review*, **5**(2): 7–32, 2002.
- 186. "The Schooling of Southern Blacks: The Roles of Legal Activism and Private Philanthropy, 1910-1960," (with J. Donohue and P. Todd), *The Quarterly Journal of Economics*, **117**(1): 225–268, 2002.
- 187. "Identifying Hedonic Models," (with I. Ekeland and L. Nesheim), *American Economic Review*, **92**(2): 304–309, 2002.
- 188. "The Evidence on Credit Constraints in Post-Secondary Schooling," (with P. Carneiro), *Economic Journal*, **112**(482):705–734, 2002.
- 189. "The Performance of Performance Standards," (with C. Heinrich and J. Smith), *Journal of Human Resources*, **37**(4): 778–811, 2002.
- 190. "Adverse Selection and Moral Hazard in Insurance: Can Dynamic Data Help to Distinguish?" (with J. Abbring, P.-A. Chiappori and J. Pinquet), *Journal of the European Economic Association*, **1**(2-3): 512-521, 2003.
- 191. "Estimating Distributions of Treatment Effects with an Application to the Returns to Schooling and Measurement of the Effects of Uncertainty on College Choice," (Klein Lecture) (with P. Carneiro and K. Hansen), *International Economic Review*, **44**(2): 361–422, 2003.

- 192. "Human Capital Policy" (with P. Carneiro), in J. Heckman and A. Krueger, eds., *Inequality in America: What Role for Human Capital Policy?*, (MIT Press), 2003.
- 193. "Wage Subsidies and Skill Formation: A Study of the Earned Income Tax Credit," (with R. Cossa and L. Lochner) in E. Phelps, ed., *Designing Inclusion*, (Cambridge University Press), 2003.
- 194. "China's Investment in Human Capital," *Economic Development and Cultural Change*, **51**(4), 2003.
- 195. "Simple Estimators for Treatment Parameters within a Latent Variable Framework," (with J. Tobias and E. Vytlacil), *Review of Economics and Statistics*, **85**(3), 2003.
- 196. "Conditioning, causality and policy analysis," (Commentary), *Journal of Econometrics*, **112**, 2003.
- 197. "Flexibility and Job Creation: Lessons from Germany," in P. Aghion, R. Frydman, J. Stiglitz and M. Woodford, eds., *Knowledge, Information, and Expectations in Modern Macroeconomics*, (Princeton and Oxford: Princeton University Press), 2003.
- 198. "The Supply Side of the Race Between Supply and Demand: Policies to Foster Skill in the Modern Economy," (Netherlands Economic Review), *Quarterly Review of the Royal Netherlands Economic Association*, March 2003, Tinbergen Lecture (October 2002).
- 199. "Using Matching, Instrumental Variables and Control Functions to Estimate Economic Choice Models," (with S. Navarro) *Review of Economics and Statistics*, **86**(1): 30–57, 2004.
- 200. "The Effect of Schooling and Ability on Achievement Test Scores," (Aigner Prize paper) (with Karsten T. Hansen, Kathleen J. Mullen), *Journal of Econometrics*, **121**: 39–98, 2004.
- 201. "Determinants of Participation in A Social Program," (with J. Smith) *Journal of Labor Economics*, **22**(2), April 2004.
- 202. "Remarks on the Life and Work of Jacob Mincer," *Review of Economics of the Household*, **1**(4), 2004.
- 203. "Simulation and Estimation of Hedonic Models," (with R. Matzkin and L. Nesheim) in T. Kehoe, T.N. Srinivasan, J. Whalley, eds., *Frontiers in Applied General Equilibrium Modeling*, (Cambridge University Press), 2004.
- 204. "Identification and Estimation of Hedonic Models," (with I. Ekeland and L. Nesheim) *Journal of Political Economy*, **112**(1), 2004.
- 205. "Selection Bias, Comparative Advantage and Heterogeneous Returns to Education: Evidence from China in 2000," (with Xuesong Li), *Pacific Economic Review*, **9**(3), 2004.
- 206. "Lessons from the Technology of Skill Formation," *Annals of the New York Academy of Sciences*, **1038**: 1–22, 2004.
- 207. "Estimating treatment effects for discrete outcomes when responses to treatment vary: an application to Norwegian vocational rehabilitation programs," (with A. Aakvik and E. Vytlacil) *Journal of Econometrics*, **125**: 15–51, 2005.

- 208. "Measuring Disparate Impacts and Extending Disparate Impact Doctrine to Organ Transplantation," (with R. Bornholz) *Perspectives in Biology and Medicine*, **48**(1): S95–S122, 2005.
- 209. "Separating Heterogeneity from Uncertainty in Measuring Income Inequality," (2004 Hicks Lecture), (with F. Cunha and S. Navarro) *Oxford Economic Papers*, **57**: 191–261, 2005.
- 210. "China's Human Capital Investment," (new version), *China Economic Review*, **16**: 50–70, 2005.
- 211. "Skill Policies for Scotland," (with D. Masterov), in D. Coyle, W. Alexander and B. Ashcroft, eds., *New Wealth for Old Nations: Scotland's Economic Prospects*, (Princeton and Oxford: Princeton University Press), 119–165, 2005.
- 212. "Inequality in America: What role for human capital policies?" *Focus* (University of Wisconsin–Madison, Institute for Research on Poverty), **23**(3): 1–10, 2005.
- 213. "Labor Market Discrimination and Racial Differences in Premarket Factors," (with P. Carneiro and D. Masterov), *Journal of Law and Economics*, **48**(1): 1–39, 2005.
- 214. "Structural Equations, Treatment, Effects and Econometric Policy Evaluation," (with E. Vytlacil) *Econometrica*, **73**(3): 669–738, 2005.
- 215. "Understanding the Sources of Ethnic and Racial Wage Gaps and Their Implications for Policy," (with P. Carneiro and D. Masterov), in R. Nelson and L. Nielsen, eds., *Handbook of Research on Employment Discrimination: Rights and Realities*, (Springer), 2005.
- 216. "Contributions of Zvi Griliches," *Annales d'Economie et Statistique*, **79-80** (July-December, Special issue in tribute to Zvi Griliches), 2005.
- 217. "The Scientific Model of Causality," Sociological Methodology, 35: 1–97, 2005.
- 218. "Counterfactual Analysis of Inequality and Social Mobility," (with F. Cunha and S. Navarro) in S. Morgan, D. Grusky and G. Fields. eds., *Mobility and Inequality: Frontiers of Research from Sociology and Economics*, Palo Alto: Stanford University Press, Chapter 4, 2006.
- 219. "Skill Formation and the Economics of Investing in Disadvantaged Children," *Science*, **312**(5782): 1900-1902 (June, 2006).
- 220. "Economic, Neurobiological, and Behavioral Perspectives on Building America's Future Workforce," (with E. Knudsen, J. Cameron and J. Shonkoff) *Proceedings of the National Academy of Sciences*, **103**(27): 10155-10162 (July, 2006).
- 221. "Earnings Functions, Rates of Return and Treatment Effects: The Mincer Equation and Beyond," (with L. Lochner and P. Todd) in E. Hanushek and F. Welch, eds., *Handbook of the Economics of Education*, (North Holland: Amsterdam), pp. 307–458 (2006).
- 222. "Interpreting the Evidence on Life Cycle Skill Formation," (with F. Cunha, L. Lochner and D. Masterov) in E. Hanushek and F. Welch, eds., *Handbook of the Economics of Education*, (North Holland: Amsterdam), pp. 697–812 (2006).
- 223. "Dynamic Discrete Choice and Dynamic Treatment Effects," (with S. Navarro), *Journal of Econometrics*, **136**(2): 341-396, (February, 2007).

- 224. "Bias Corrected Estimates of GED Returns," (with P. LaFontaine), *Journal of Labor Economics*, **24**(3): 661-700, (July, 2006).
- 225. "The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior," (with J. Stixrud and S. Urzua), *Journal of Labor Economics*, **24**(3): 411-482, (July, 2006).
- 226. "Understanding Instrumental Variables in Models with Essential Heterogeneity," (with S. Urzua and E. Vytlacil), *Review of Economics and Statistics*, **88**(3): 389-432, (2006).
- 227. "Economic, Neurobiological and Behavioral Perspectives on Building America's Future Workforce")with E. Knudsen, J. Cameron and J. Shonkoff) *World Economics*, **7**(3), (July-September, 2006).
- 228. "Familias y habilidades como determinantes de logros economics y sociales (Family and Abilities as determinants of socio-economic success)" with S. Urzua, in *Familia y Felicidad: Un Circulo Virtuoso*, C. Larroulet and R. Camhi, eds. Santiago, Chile: Libertad y Desarrollo.
- 229. "Comments on Are Protective Labor Market Institutions at the Root of Unemployment? A Critical Review of the Evidence by David Howell, Dean Baker, Andrew Glyn and John Schmitt." Capitalism and Society, 2(1, Article 5). (2007).
- 230. "Econometric Evaluation of Social Programs, Part I: Causal Models, Structural Models and Econometric Policy Evaluation," (with E. Vytlacil) in *Handbook of Econometrics, Volume 6B*, edited by J. Heckman and E. Leamer. Amsterdam: Elsevier, pp. 4779-4874. 2007.
- 231. "Econometric Evaluation of Social Programs, Part II: Using the Marginal Treatment Effect to Organize Alternative Economic Estimators to Evaluate Social Programs and to Forecast Their Effects in New Environments," (with E. Vytlacil) in *Handbook of Econometrics, Volume 6B*, edited by J. Heckman and E. Leamer. Amsterdam: Elsevier, pp. 4875-5144. 2007.
- 232. "Econometric Evaluation of Social Programs, Part III: Distributional Treatment Effects, Dynamic Treatment Effects, Dynamic Discrete Choice, and General Equilibrium Policy Evaluation," (with J. Abbring) in *Handbook of Econometrics, Volume 6B*, edited by J. Heckman and E. Leamer. Amsterdam: Elsevier, pp. 5145-5303. 2007.
- 233. "The Technology of Skill Formation," (with F. Cunha), *American Economic Review*, **97**(2):31-47, (2007).
- 234. "The Economics, Technology and Neuroscience of Human Capability Formation," *Proceedings of the National Academy of Sciences*, **104**(33): 13250-13255, (2007).
- 235. "The Productivity Argument for Investing in Young Children," (with D. V. Masterov), *Review of Agricultural Economics*, **29**(3): 446-493, (2007).
- 236. "Identifying and Estimating the Distributions of *Ex Post* and *Ex Ante* Returns to Schooling," (with F. Cunha), *Labour Economics*, **14**(6): 870-893 (2007).
- 237. "The Identification and Economic Content of Ordered Choice Models with Stochastic Thresholds," (with F. Cunha and S. Navarro), *International Economic Review* **48**(4): 1273-1309 (2007).

- 238. "Use of Instrumental Variables in the Presence of Heterogeneity and Self-Selection: An Application to Treatments of Breast Cancer Patients," (with A. Basu, S. Navarro-Lozano and S. Urzua), *Health Economics*, **16**(11): 1133-1157 (2007).
- 239. "Earnings Functions and Rates of Return," (with L. Lochner and P. Todd), *Journal of Human Capital*, **2**(1): 1-31 (2008).
- 240. "Econometric Causality," *International Statistical Review*, **76**(1): 1-27 (2008).
- 241. "An Assessment of Causal Inference in Smoking Initiation Research and a Framework for Future Research," (with F. Flyer and C. Loughlin), *Economic Inquiry*, **46**(1): 37-44 (2008).
- 242. "The Roy Model," (with C. Taber), in S. N. Durlauf and L. E. Blume (eds.), *New Palgrave Dictionary of Economics* (2 ed.) Palgrave Macmillan. 2008.
- 243. "A New Framework for the Analysis of Inequality," (with F. Cunha), *Macroeconomic Dynamics*, **12**(Supplement 2), pp. 315-354. (2008).
- 244. "Formulating, Identifying and Estimating the Technology of Cognitive and Noncognitive Skill Formation," (with F. Cunha), *Journal of Human Resources*, 43(4): 738-782. (2008).
- 245. "The Economics and Psychology of Personality Traits," (with L. Borghans, A. L. Duckworth, and B. ter Weel), *Journal of Human Resources*, 43(4): 972-1059. (2008).
- 246. "Dynamic Policy Analysis," (with J. H. Abbring), *The Econometrics of Panel Data* (3rd ed.), edited by L. Matyas and P. Sevestre, (Dordrecht: Springer), 2008.
- 247. "Identification of Treatment Effects Using Control Functions in Models with Continuous, Endogenous Treatment and Heterogeneous Effects," (with J.P. Florens, C. Meghir and E. Vytlacil), *Econometrica*, **76**(5): 1191-1206, 2008.
- 248. "The Role of Income and Family Influence on Child Outcomes," *Annals of the New York Academy of Sciences*, 1136(Reducing the Impact of Poverty on Health and Human Development: Scientific Approaches): 307-323, 2008.
- 249. "Schools, Skills and Synapses," *Economic Inquiry*, **46**(3): 289-324, 2008.
- 250. "Instrumental Variables in Models with Multiple Outcomes: The General Unordered Case," (with S. Urzua and E. Vytlacil). Forthcoming, *Les Annales d'Economie et de Statistique*, (2008).
- 251. "The American High School Graduation Rate: Trends and Levels," (with P. LaFontaine). Forthcoming, *Review of Economics and Statistics*. (2009).
- 252. "Comparing IV With Structural Models: What Simple IV Can and Cannot Identify," (with S. Urzua). Forthcoming *Journal of Econometrics*, 2009.
- 253. "Gender Differences in Risk Aversion and Ambiguity Aversion," (with L. Borghans, B. Golsteyn, and H. Meijers). Forthcoming, *Journal of the European Economic Association*, (2009).
- 254. "The Economics and Psychology of Inequality and Human Development," (with F. Cunha). Forthcoming, *Journal of the European Economic Association*, (2009).

- 255. "A Note on Adapting Propensity Score Matching and Selection Models to Choice Based Samples," (with P. Todd). Forthcoming, *Econometric Journal*, (2009).
- 256. "Estimating the Technology of Cognitive and Noncognitive Skill Formation," (with F. Cunha and S. Schennach). Under revision, *Econometrica*, (2009).
- 257. "The Many Contributions of Edmund Phelps, 2006 Nobel Laureate," Forthcoming, *Capitalism and Society*, 2009.

Working Papers, Papers In Progress And Papers Under Review

- 1. "Internal Adjustment Costs And The Neoclassical Theory of the Firm," (with V. K. Chetty), 1971.
- 2. "Dynamic Models of Female Labor Supply," unpublished, University of Chicago, March 1977.
- 3. "Shadow Prices, Market Wages and Labor Supply Revisited: Some Corrections and Computational Simplifications," mimeo (June 1975).
- 4. "New Evidence on the Assertion that the Government has Shifted the Relative Demand Curve For Labor In Favor of Blacks," (with R. Butler), June 1978.
- 5. "Three State Search Models," (with T. Coleman), unpublished, April 1981.
- 6. "The Empirical Content of Alternative Models of Labor Earnings," unpublished, 1978, revised 1982.
- 7. "A Sequential Model of Schooling," (with S. Cameron), Yale, 1990.
- 8. "Alternative Approaches To The Evaluation of Social Programs: Econometric and Experimental Methods," Barcelona Lecture, Sixth World Meetings of The Econometric Society, 1990.
- 9. "The Case for Simple Estimators: Experimental Evidence From the National JTPA Study," unpublished manuscript, University of Chicago, November 1993.
- 10. "Semiparametric Program Evaluation: Lessons From An Evaluation of a Norwegian Training Program," (with A. Aakvik and E. Vytlacil) unpublished manuscript, University of Chicago, 1999.
- 11. "Using the EITC to Test Between Two Competing Models of Skill Formation," (with L. Lochner), unpublished manuscript, University of Chicago, 2000.
- 12. "The GED is a Mixed Signal: The Effect of Cognitive and Noncognitive Skills on Human Capital and Labor Market Outcomes," (with Y. Rubinstein and J.Hsee), June, 2001, Revised in April 2002.
- 13. "Nonparametric Identification of Nonadditive Hedonic Models," (with R.M. Matzkin and L. Nesheim), May 2002. Revised, October 2008. Under revision, *Econometrica*.
- 14. "Understanding The Contribution of Legislation, Social Activism, Markets and Choice To The Economic Progress of African Americans in the Twentieth Century," (with Petra Todd), unpublished manuscript, University of Chicago, 2003.

- 15. "Interpreting the Evidence of Family Influence on Child Development," (with P. Carneiro and F. Cunha), unpublished, 2004.
- 16. "The Evolution of Inequality, Heterogeneity and Uncertainty in Labor Earnings in the U.S. Economy," (with F. Cunha), NBER Working Paper No. 13526, October, 2007.
- 17. "The Productivity Argument for Investing in Young Children," (with D. Masterov), Early Childhood Research Collaborative Discussion Paper, August, 2006.
- 18. "Testing the Correlated Random Coefficient Model," (with D. Schmierer and S. Urzua). 2008. Under revision, *Journal of Econometrics*.
- 19. "Taking the Easy Way Out: How the GED Testing Program Induces Students to Drop Out." (with P. LaFontaine and P. Rodríguez). Unpublished manuscript, University of Chicago, Department of Economics.
- 20. "Early Childhood Intervention: Rationale, Timing and Efficacy." (with O. Doyle, C. Harmon, and R. Tremblay). Technical report No. 200705, Geary Institute, University College Dublin, Dublin.
- 21. "The Option Value of Educational Choices and the Rate of Return to Educational Choices," Cowles Foundation Structural Conference, Yale University. June 13, 2008. Under revision.
- 22. "Understanding the GED," Albert Rees Memorial Lecture, Society of Labor Economists Annual Meetings, May 9, 2008. Under revision.