March 1995

JERRY A. HAUSMAN
Massachusetts Institute of Technology
Department of Economics
Building E52-271A
Cambridge 02139
(617) 253-3644

EDUCATION:

OXFORD UNIVERSITY
D. Phil. 1973 (Ph.D)
B. Phil. 1972

BROWN UNIVERSITY
A.B. (Summa Cum Laude), 1968

THESIS: "A Theoretical and Empirical Study of Vintage Investment and Production in Great Britain," Oxford University, 1973.

FELLOWSHIPS, HONORS AND AWARDS:

Phi Beta Kappa
Marshall Scholar at Oxford, 1970-1972
Scholarship at Nuffield College, Oxford, 1971-1972
Fellow of Econometric Society, 1979.
Frisch Medal of the Econometric Society, 1980
Fisher-Schultz Lecture for the Econometric Society, 1982
John Bates Clark Award of the American Economic Association, 1985
Jacob Marschak Lecture for the Econometric Society, 1988
American Academy of Arts and Sciences, 1991.

EMPLOYMENT:

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

1992-	John and Jennie S. MacDonald Professor
1979-	Professor, Department of Economics
1976-79	Associate Professor, Department of Economics
1973-76	Assistant Professor, Department of Economics
1972-73	Visiting Scholar, Department of Economics

VISITING APPOINTMENTS:

1986-87	Visiting Professor, Harvard Business School
1982-83	Visiting Professor, Harvard University Department of Economics

U.S. ARMY, ANCHORAGE, ALASKA

1968-70	Corps of Engineers

PROFESSIONAL ACTIVITIES:

Associate Editor, Bell Journal of Economics, 1974-1983
Associate Editor, Rand Journal of Economics, 1984-1988
Associate Editor, Econometrica, 1978-1987
Reviewer, Mathematical Reviews, 1978-1980
American Editor, Review of Economic Studies, 1979-82
Associate Editor, Journal of Public Economics, 1982-
Associate Editor, Journal of Applied Econometrics, 1985-1993
Member of MIT Center for Energy and Environmental Policy Research, 1973-
Research Associate, National Bureau of Economic Research, 1979-
Member, American Statistical Association Committee on Energy Statistics, 1981-1984
Special Witness (Master) for the Honorable John R. Bartels, U.S. District Court for the Eastern District of New York in Carter vs. Newsday, Inc., 1981-82
Member of Governor's Advisory Council (Massachusetts) for Revenue and Taxation, 1984-1992
Member, Committee on National Statistics, 1985-1990
Member, National Academy of Social Insurance, 1990-
Member, Committee to Revise U.S. Trade Statistics 1990-1992
Director, MIT Telecommunications Economics Research Program, 1988-
Board of Directors, Theseus Institute, France Telecom University, 1988-
Member, Conference on Income and Wealth, National Bureau of Economic Research, 1992-

PUBLICATIONS:

I. Econometrics

"Minimum Mean Square Estimators and Robust Regression," Oxford Bulletin of Statistics, April 1974.

"Minimum Distance and Maximum Likelihood Estimation of Structural Models in Econometrics," delivered at the European Econometric Congress, Grenoble: August 1974.

"Full-Information Instrumental Variable Estimation of Simultaneous Equation Models," Annals of Economic and Social Measurment, October 1974.

"Estimation and Inference in Nonlinear Structural Models," Annals of Economic and Social Measurement, with E. Berndt, R.E. Hall, and B.H. Hall, October 1974.

"An Instrumental Variable Approach to Full-Information Estimators in Linear and Certain Nonlinear Econometric Models," Econometrica, May 1975.

"Simultaneous Equations with Errors in Variables," delivered at Winter Econometric Meetings, San Francisco: December 1974; published in Journal of Econometrics 5, 1977, pp. 389-401.

"Social Experimentation, Truncated Distributions, and Efficient Estimation," delivered at the World Econometric Congress, Toronto: August 1975; Econometrica, with D. Wise, June 1977.

"A Conditional Probit Model for Qualitative Choice," delivered at World Econometric Congress, Toronto: August 1975; MIT Working Paper 173, April 1976; Econometrica, with D. Wise, March 1978.

PUBLICATIONS cont.:

"Specification Tests in Econometrics," MIT Working Paper 185, June 1976; Econometrica, 1978.

"Non-Random Missing Data," with A.M. Spence, MIT Working Paper 200, May 1977.

"Attrition Bias in Experimental and Panel Data: The Gary Income Maintenance Experiment," with D. Wise, J.F. Kennedy School Working Paper, May 1977; Econometrica, January 1979.

"Missing Data and Self Selection in Large Panels," with Z. Griliches and B.H. Hall, Harvard Economics Department Working Paper, August 1977; delivered at INSEE conference on Panel Data, Paris: August 1977; Annales de l'INSEE, April 1978.

"Stratification on Endogenous Variables and Estimation," with D. Wise, J.F. Kennedy School Working Paper, January 1978; delivered at CME Conference, April 1978; in The Analysis of Discrete Economic Data, ed. C. Manski and D. McFadden, MIT Press, 1981.

"Les models probit de choix qualitatifs," ("Alternative Conditional Probit Specifications for qualitative Choice.") (English Version), September 1977; EPRI report on discrete choice models, presented at INSEE Seminar, Paris: May 1978; Cahiers du Seminar d'Econometrie, 1980.

"The Econometrics of Labor Supply on Convex Budget Sets," Economic Letters, 1979.

"Panel Data and Unobservable Individual Effects," with W. Taylor, MIT Working Paper 225; Econometrica 49, November 1981.

"Comparing Specification Tests and Classical Tests," with W. Taylor, August 1980, Economic Letters, 1981.

"The Effect of Time on Economic Experiments," invited paper at Fifth World Econometrics Conference, August 1980; in Advances in Econometrics, ed. W. Hildebrand, Cambridge University Press, 1982.

"Sample Design Considerations for the Vermont TOD Use Survey," with John Trimble, Journal of Public Use Data, 9, 1981.

"Identification in Simultaneous Equations Systems with Covariance Restrictions: An Instrumental Variable Interpretation," with W. Taylor, December 1980; Econometrica, 1983.

"Stochastic Problems in the Simulation of Labor Supply," presented at NBER conference, January 1981; in Tax Simulation Models, ed. M. Feldstein, University of Chicago Press, 1983.

"The Design and Analysis of Social and Economic Experiments," invited paper for 43rd International Statistical Institute Meeting, 1981; Review of the ISI.

"Specification and Estimation of Simultaneous Equation Models," in Handbook of Econometrics, ed. Z. Griliches and M. Intriligator, vol. 1, 1983.

"Full-Information Estimators," in Kotz-Johnson, Encyclopedia of Statistical Science,vol. 3, 1983

"Instrumental Variable Estimation," in Kotz-Johnson, Encyclopedia of Statistical Science, vol. 4, 1984

PUBLICATIONS cont.:

"Specification Tests for the Multinomial Logit Model," with D. McFadden, October 1981; Econometrica, 1984.

"Econometric Models for Count Data with an Application to the Patents R&D Relationship," with Z. Griliches and B. Hall, NBER Working Paper, August 1981; Econometrica, 1984.

"The Econometrics of Nonlinear Budget Sets," Fisher-Shultz lecture for the Econometric Society, Dublin: 1982; Econometrica, 1985.

"The J-Test as a Hausman Specification Test," with H. Pesaran, November 1982; Economic Letters, 1983.

"Seasonal Adjustment with Measurement Error Present," with M. Watson, May 1983; Journal of the American Statistical Association, 1985.

"Efficient Estimation and Identification of Simultaneous Equation Models with Covariance Restrictions," with W. Newey and W. Taylor, October 1983; Econometrica, 1987.

"Technical Problems in Social Experimentation: Cost Versus Ease of Analysis," with D. Wise, in Social Experimentation, ed. J. Hausman and D. Wise, 1985.

"Errors in Variables in Panel Data," with Z. Griliches, Journal of Econometrics, 1986.

"Specifying and Testing Econometric Models for Rank-Ordered Data," with P. Ruud; Journal of Econometrics, 1987.

"Semiparametric Identification and Estimation of Polynomial Errors in Variables Models," with W. Newey, J. Powell and H. Ichimura, 1986, Journal of Econometrics, 1991.

"Flexible Parametric Estimation of Duration and Competing Risk Models," with A. Han, November 1986, revised January 1989, Journal of Applied Econometrics, 1990.

"Consistent Estimation of Nonlinear Errors in Variables Models with Few Measurements," with W. Newey and J. Powell, 1987.

"Nonlinear Errors in Variables: Estimation of Some Engel Curves," Jacob Marschak Lecture of the Econometric Society, Canberra 1988, forthcoming in Journal of Econometrics.

"Optimal Revision and Seasonal Adjustment of Updated Data: Application to Housing Starts," with M. Watson, Journal of the American Statistical Association Proceedings, 1991.

"Seasonal Adjustment of Trade Data," with R. Judson and M. Watson, ed. R. Baldwin, Behind the Numbers: U.S. Trade in the World Economy, 1992.

"Nonparametric Estimation of Exact Consumers Surplus and Deadweight Loss," with W. Newey, 1990, revised 1992, revised 1995, forthcoming Econometrica.

"Misclassification of a Dependent Variable in Qualitative Reponse Models," with F. Scott-Morton, mimeo December 1993.

PUBLICATIONS cont.:

II. Public Finance

"The Evaluation of Results from Truncated Samples," with D. Wise, Annals of Economic and Social Measurement, April 1976.

"Discontinuous Budget Constraints and Estimation: The Demand for Housing," with D. Wise, J.F. Kennedy School Working Paper, July 1977; Review of Economic Studies, 1980.

"The Effect of Taxation on Labor Supply: Evaluating the Gary Negative Income Tax Experiment," with G. Burtless, October 1977; Journal of Political Economy, December 1978.

"AFDC Participation -- Permanent or Transitory?," delivered at NBER-NSF Conference, August 1978; in Papers from the European Econometrics Meetings, ed. E. Charatsis, North Holland: 1981.

"The Effect of Wages, Taxes, and Fixed Costs on Women's Labor Force Participation," March 1979; presented at SSRC-NBER Conference on Taxation, Cambridge, England: June 1979; Journal of Public Economics, October 1980.

"The Effect of Taxes on Labor Supply," presented at Brookings Conference, October 1979; published in How Taxes Affect Economic Behavior, ed. H. Aaron and J. Pechman, Brookings: 1981.

"Income and Payroll Tax Policy and Labor Supply," presented at St. Louis Fed. conference, October 1980; in The Supply Side Effects of Economic Policy, ed. G. Burtless, St. Louis: 1981.

"Individual Retirement Decisions Under an Employer-Provided Pension Plan and Social Security," with G. Burtless, Journal of Public Economics, 1982.

"Individual Retirement and Savings Decisions," with P. Diamond, October 1981; presented at SSRC-NBER Conference on Public Economics, Oxford: June 1982; Journal of Public Economics, 1984.

"Retirement and Unemployment Behavior of Older Men," with P. Diamond, presented at Brookings Conference on the Aged, November 1982; in H. Aaron and G. Burtless, Retirement and Economic Behavior, Brookings: 1984.

"Tax Policy and Unemployment Insurance Effects on Labor Supply," May 1983; in Removing Obstacles to Economic Growth, ed. M. Wachter, 1984.

"Family Labor Supply with Taxes," with P. Ruud, American Economic Review, 1984.

"Social Security, Health Status and Retirement," with D. Wise, in Pensions, Labor, and Individual Choice, ed. D. Wise, 1985.

"The Effect of Taxes on Labor Supply," January 1983; in Handbook on Public Economics, ed. A. Auerbach and M. Feldstein, 1985.

"Choice Under Uncertainty: The Decision to Apply for Disability Insurance," with J. Halpern, Journal of Public Economics, 1986.

PUBLICATIONS cont.:

"Household Behavior and the Tax Reform Act of 1986," with J. Poterba, October 1986; Journal of Economic Perspectives, 1987, also published in French in Annales D'Economie et de Statistique, 1988.

"Involuntary Early Retirement and Consumption," with L. Paquette, ed. G. Burtless, Economics of Health and Aging, 1987.

"Income Taxation and Social Insurance in China," in Sino-U.S. Scholars on Hot Issues in China's Economy, 1990.

"On Contingent Valuation Measurement of Nonuse Values," with P. Diamond, in Contingent Valuation: A Critical Appraisal, ed. J. Hausman, 1993.

"Does Contingent Valuation Measure Preferences? Experimental Evidence," with P. Diamond, G. Leonard, M. Denning, in Contingent Valuation: A Critical Appraisal, ed. J. Hausman, 1993.

"Contingent Valuation: Is Some Number Better than No Number?" with P. Diamond, December 1993, forthcoming in Journal of Economic Perspectives.

III. Applied Micro Models

"Project Independence Report: A Review of U.S. Energy Needs up to 1985," Bell Journal of Economics, Autumn 1975.

"Individual Discount Rates and the Purchase and Utilization of Energy Using Durables," MIT Energy Laboratory Working Paper, January 1978; Bell Journal of Economics, Spring 1979.

"Voluntary Participation in the Arizona Time of Day Electricity Experiment," with D. Aigner, May 1978; delivered at EPRI Conference on Time of Day Pricing, June 1978; in EPRI Report, Modeling and Analysis of Electricity Demand by Time of Day, 1979; Bell Journal of Economics, 1980.

"A Two-level Electricity Demand Model: Evaluation of the Connecticut Time-of-Day Pricing Test," delivered at EPRI Conference on Time of Day Pricing; with D. McFadden, in EPRI Report, Modeling and Analysis of Electricity Demand by Time of Day, 1979; Journal of Econometrics, 1979.

"Assessing the Potential Demand for Electric Cars," with S. Beggs and S. Cardell, presented at EPRI Conference, November 1979; Journal of Econometrics, 1981.

"Assessment and Validation of Energy Models," presented at EIA-NBS conference on Energy Models, May 1980; in Validation and Assessment of Energy Models, ed. S. Gass, Washington: Department of Commerce, 1981.

"Exact Consumer Surplus and Deadweight Loss," working paper 1979, American Economic Review, 71, 1981.

"Appliance Purchase and Usage Adaptation to a Permanent Time of Day Electricity Rate Schedule," with J. Trimble, August 1983; Journal of Econometrics, 1984.

PUBLICATIONS cont.:

"Evaluating the Costs and Benefits of Appliance Efficiency Standards," with P. Joskow, MIT Energy Lab Working Paper, MIT-EL82005WP; American Economic Review, 72, 1982.

"Information Costs, Competition and Collective Ratemaking in the Motor Carrier Industry," presented at Conference On Consensual Decision Making, American University, August 1982; American University Law Review, 1983.

"An Overview of IFFS," presented at EIA-NBS Conference on Energy Models, August 1982; in Intermediate Future Forecasting System, ed. S. Gass et al., Washington: 1983.

"Choice of Conservation Actions in the AHS," November 1982; in Energy Simulation Models, ed. R. Crow, 1983.

"Patents and R&D: Searching for a Lag Structure," with B. Hall and Z. Griliches, in Actes du Colloque Econometrie de la Recherce, Paris: 1983.

"The Demand for Optional Local Measured Telephone Service," in Adjusting to Regulatory, Pricing and Marketing Realities, East Lansing: 1983.

"Patents and R&D: Is There a Lag?," with B. Hall and Z. Griliches, 1985; International Economic Review, 1986.

"Price Discrimination and Patent Policy," with J. MacKie-Mason, Rand Journal of Economics, 1988.

"Residential End-Use Load Shape Estimation from Whole-House Metered Data," IEEE Transactions on Power Systems, 1988 (with I. Schick, P. Vsoro, and M. Ruane).

"Competition in Telecommunications for Large Users in New York," with H. Ware and T. Tardiff, Telecommunications in a Competitive Environment, 1989.

"Innovation and International Trade Policy," Oxford Review of Economic Policy, 1988 (with J. MacKie-Mason).

"The Evolution of the Central Office Switch Industry," with W. E. Kohlberg, 1987; in ed. S. Bradley and J. Hausman, Future Competition in Telecommunications, 1989.

"Future Competition in Telecommunications," 1987; ed. S. Bradley and J. Hausman, Future Competition in Telecommunications, 1989.

"Joint Ventures, Strategic Alliances and Collaboration in Telecommunications," presented at International Conference on Joint Ventures in Telecommunications, October 1989, Regulation, 1991.

"An Ordered Probit Model of Intra-day Securities Trading," with A. Lo and C. MacKinlay, Journal of Financial Economics, 1992.

"A Proposed Method for Analyzing Competition Among Differentiated Products," with G. Leonard and J.D. Zona, Antitrust Law Journal, 60, 1992.

PUBLICATIONS cont.:

"A Utility-Consistent Combined Discrete Choice and Count Data Model: Assessing Recreational Use Losses Due to Natural Resource Damage," with G. Leonard and D. McFadden, October 1992, Journal of Public Economics, 56, 1995.

"Global Competition and Telecommunications," in Bradley, et al., ed., Globalization, Technology and Competition, 1993.

"The Bell Operating Companies and AT&T Venture Abroad and British Telecom and Others Come to the US," presented at Harvard Business Conference on International Telecommunications, 1991, in Bradley, et al., ed., Globalization, Technology and Competition, 1993.

"Competitive Analysis with Differentiated Products," with G. Leonard and D. Zona, September 1992, forthcoming in Annales, D'Economie et de Statistique.

"The Effects of the Breakup of AT&T on Telephone Penetration in the US," with T. Tardiff and A. Belinfante, American Economic Review, 1993.

"Proliferation of Networks in Telecommunications," ed. D. Alexander and W. Sichel, Networks, Infrastructure, and the New Task for Regulation, University of Michigan Press, forthcoming 1995.

"The Effect of Superstars in the NBA: Economic Value and Policy," with G. Leonard, mimeo May 1994.

"Valuation of New Goods Under Perfect and Imperfect Competition," MIT Working Paper, June, 1994.

"Cellular Telephone: Competition and Regulation," mimeo, June 1994.

"Competition in Long Distance and Equipment Markets: Effects of the MFJ," 1994, forthcoming in Journal of Managerial and Decision Economics, 1995.

"The Cost of Cellular Telephone Regulation," mimeo, 1995.

JOINT REPORTS, TESTIMONY, AND BOOKS:

"Project Independence: An Economic Analysis," Technology Review, May 1974.

"The FEA's Project Independence Report: Testimony before Joint Economic Committee," U.S. Congress, March 18, 1975.

"The FEA's Project Independence Report: An Analytical Assessment and Evaluation," NSF Report, June 1975.

"Energy Demand in the ERDA Plan," with D. Wood, Energy Laboratory Report, August 1975.

JOINT REPORTS, TESTIMONY, AND BOOKS cont.:

"A Note on Computational Simplifications and Extensions of the Conditional Probit Model," EPRI report on choice models, September 1977.

"Labor Supply Response of Males to a Negative Income Tax," Testimony for U.S. Senate Finance Subcommittee on Public Assistance, November 22, 1978.

"Appliance Choice with Time of Day Pricing," Energy Laboratory Report, January 1980.

"Discrete Choice Models with Uncertain Attributes," Oak Ridge National Laboratories Report, January 1980.

"Individual Savings Behavior," with P. Diamond, Report to the National Commission on Social Security, May 1980.

"Wealth Accumulation and Retirement," with P. Diamond, Report to the Department of Labor, May 1982.
"A Review of IFFS," Report to the Energy Information Agency, February 1982.

"A Model of Heating System and Appliance Choice," with J. Berkovec and J. Rust, December 1983.

"Labor Force Behavior of Older Men After Involuntary Job Loss," with L. Paquette, Report to Department of Health and Human Services, December 1985.

"Pollution and Work Days Lost," with D. Wise and B. Ostrow, NBER Working Paper, January 1984; Revised 1985.

"Demand for Interstate Long Distance Telephone Service," with A. Jafee and T. Tardiff, November 1985.

"Competition in the Information Market 1990", August 1990.

The Choice and Utilization of Energy Using Durables, ed. J. Hausman, Palo Alto: EPRI, 1981.

Social Experimentation, ed. J. Hausman and D. Wise, Chicago: 1985.

Future Competition in Telecommunications, ed. S. Bradley and J. Hausman, Harvard: 1989.

Contingent Valuation: A Critical Appraisal, ed. J. Hausman, North Holland, 1993.

Globalization, Technology and Competition, ed. S. Bradley, J. Hausman, R. Nolan, Harvard 1993.

"The Welfare Cost to the US Economy of Regulatory Restriction in Telecommunications," January 1995.

Economic Impact of Deregulating U.S. Communications Industries, The WEFA Group, Burlington, MA, February 1995.

JAH/lag

NATIONAL ECONOMIC
RESEARCH ASSOCIATES
1800 M STREET, NW, WASHINGTON, DC 20036
TEL: 202.466.3510 FAX: 202.466.3605

nera
Consulting Economists

TIMOTHY J. TARDIFF

BUSINESS ADDRESS

National Economic Research Associates, Inc.
One Main Street
Cambridge, Massachusetts 02142
(617) 621-0444

Dr. Tardiff received a B.S. with honors in Mathematics from the California Institute of Technology in Pasadena and a Ph.D. degree in Social Science from the University of California, Irvine, under a National Science Foundation Pre-doctoral Fellowship and an NSF Grant for Improving Dissertation Research in the Social Sciences.

Dr. Tardiff joined the faculties of the Department of Civil Engineering and the Division of Environmental Studies at the University of California, Davis. He taught undergraduate and graduate level courses in transportation and environmental policy analysis. His research included applications of econometric models of consumer choice to transportation planning problems. Dr. Tardiff's research was funded by the National Science Foundation, the Institute of Transportation Studies and the California Department of Transportation.

Prior to joining NERA, Dr. Tardiff's work included transportation, energy, public utility and telephone industry projects for the U.S. Departments of Transportation and Energy, the California Energy Commission, and several telephone and electric utilities.

Since joining NERA, he has evaluated pricing policies for increasingly competitive telecommunications markets, including appropriate mechanisms for pricing access services to competitors; studied actual and potential competition for services provided by telephone operating companies; analyzed the demand and revenue impacts of new telephone rate structures; developed and evaluated damage studies used in major telecommunications antitrust actions; analyzed the market potential for cellular radio; evaluated the investment and marketing programs of telephone companies; and developed a demand model for analyzing the market potential for alternative employee health care plans, including health maintenance organizations.

Dr. Tardiff has published extensively in the transportation literature. He has presented and published papers on the telecommunications industry. These papers address the issues of pricing and costing policies for emerging competition in telecommunications markets; evaluating and forecasting the impacts of telephone rate plans such as local measured service; analyzing the markets for new telecommunications products and services; and local competition and the bypass issue.

EDUCATION

UNIVERSITY OF CALIFORNIA, IRVINE
Ph.D., Social Sciences, 1974

CALIFORNIA INSTITUTE OF TECHNOLOGY
B.S., Mathematics, 1971

EMPLOYMENT

NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC.

1992 Vice President. Works on cases, mainly legal and regulatory, on issues of pricing policy, assessing demand for new and existing products and services, and economic damages. This work involves studies, often involving econometric demand analysis methods, for telecommunications, utilities and other clients. Specific areas have included: assessment of competition in the telecommunications industry; analysis of alternative approaches for regulating telephone utilities; evaluation of the benefits from telecommunication products and services; analyzing the demand for local services, toll, and carrier access; evaluation of the prudence of telephone company investments; damage studies for telecommunications antitrust cases; evaluation of methods for environmental damage assessment; and analysis of energy conservation /programs.

1984-1992 Senior Consultant

CHARLES RIVER ASSOCIATES, INC.--Boston, Massachusetts

1979-1984 Director of Marketing Research. Managed program to apply econometric customer demand models to marketing research problems in telecommunications, electric utilities, transportation and other industries.

Senior Research Associate. Performed studies on urban transportation, freight transportation, energy and telecommunications issues.

UNIVERSITY OF CALIFORNIA, DAVIS--Davis, California

1974-1979 Assistant Professor, Department of Civil Engineering and Division of Environmental Studies. Taught undergraduate and graduate course in transportation and environmental policy and quantitative research methods; conducted research on passenger transportation demand, (including econometric issues).

FELLOWSHIPS, GRANTS, AWARDS

First Place, Dissertation Contest of the Transportation Science Section of the Operations Research Society of America.

NSF Research Initiation Grant (Engineering Division), 1976-1978.

NSF Grant for Improving Doctoral Dissertation Research in the Social Sciences, 1973-1974.

NSF Predoctoral Fellowship, 1972-1974.

Public Health Service Traineeship, 1971-1972.

AFFILIATIONS

American Economic Association
International Telecommunications Society

TESTIMONY

California Public Utilities Commission, on behalf of Pacific Bell, "Evaluation of MCI's Universal Service Funding Proposal," March 10, 1995.

California's Public Utilities Commission, on behalf of Pacific Bell, "Franchise Services and Universal Service," March 10, 1995 (with Richard D. Emmerson) .

Illinois Commerce Commission on behalf of GTE North: surrebuttal testimony on the benefits of intraMSA presubscription, September 30, 1994.

Illinois Commerce Commission on behalf of GTE North: rebuttal testimony on the benefits of intraMSA presubscription, September 16, 1994.

"Economic Evaluation of OIR/OII on Open Access and Network Architecture Development: Reply Comments," prepared for filing with the California Public Utilities Commission on behalf of Pacific Bell, March 31, 1994 (with Richard D. Emmerson).

"Declaration of Timothy J. Tardiff on Pacific Bell's Productivity Under Price Caps," prepared for filing with the Federal Communications Commission, on behalf of Pacific Bell, February 28, 1994.

"Regulation of Mobile and Wireless Telecommunications: Economic Issues," prepared for filing with the California Public Utilities Commission on behalf of Pacific Bell, February 25, 1994

"Economic Evaluation of OIR/OII on Open Access and Network Architecture Development," prepared for filing with the California Public Utilities Commission on behalf of Pacific Bell, February 8, 1994 (with Richard D. Emmerson).

"Access to Intelligent Networks: Economic Issues," prepared for filing with the Federal Communications Commission, on behalf of Pacific Bell, December 1, 1993.

"The Effect of SFAS 106 on Economy-Wide Wage Rates," prepared for filing with the California Public Utilities Commission on behalf of Pacific Bell, October 1, 1993

"Economic Evaluation of the NRF Review: Reply Comments," prepared for filing with the California Public Utility Commission on behalf of Pacific Bell, May 7, 1993. William E. Taylor and Timothy J. Tardiff, Study Directors.

"Performance Under Alternative Forms of Regulation in the U.S. Telecommunications Industry," prepared for filing with the Canadian Radio-television and Telecommunications Commission on behalf of AGT Limited, April 13, 1993. Timothy J. Tardiff and William E. Taylor, Study Directors.

"Pacific Bell's Performance Under the New Regulatory Framework: An Economic Evaluation of the First Three Years," prepared for filing with the California Public Utility Commission on behalf of Pacific Bell, April 8, 1993. William E. Taylor and Timothy J. Tardiff, Study Directors.

"Pricing Interconnection and the Local Exchange Carrier's Competitive Interstate Services," prepared for filing with the Federal Communications Commission, on behalf of Pacific Bell, February 19, 1993.

"The Treatment of FAS 106 Accounting Changes Under Price Cap Regulation: Reply Comments," prepared for filing with the Federal Communications Commission on behalf of Pacific Bell, July 1992. William E. Taylor and Timothy J. Tardiff, Study Directors.

"Costs and Benefits of IntraLATA Presubscription," prepared for filing with the State of New York Public Service Commission on behalf of New York Telephone, May 1, 1992. Timothy J. Tardiff and William E. Taylor, Study Directors.

"The New Regulatory Framework 1990-1992: An Economic Review," prepared for filing with the California Public Utility Commission on behalf of Pacific Bell, May 1, 1992. William E. Taylor and Timothy J. Tardiff, Study Directors.

"The Treatment of FAS 106 Accounting Changes Under Price Cap Regulation," prepared for filing with the Federal Communications Commission on behalf of Pacific Bell, April 15, 1992. William E. Taylor and Timothy J. Tardiff, Study Directors.

"The Treatment of FAS 106 Accounting Changes Under Pacific Bell's Price Regulation Plan," prepared for filing with the California Public Utilities Commission on behalf of Pacific Bell, November 15, 1991. William E. Taylor and Timothy J. Tardiff, Study Directors.

"The Treatment of FAS 106 Accounting Changes Under Pacific Bell's Price Regulation Plan: Economic Analysis of the DRA Supplemental Testimony," prepared for filing with the California Public Utilities Commission on behalf of Pacific Bell, January 21, 1992. William E. Taylor and Timothy J. Tardiff, Study Directors.

California Public Utilities Commission on behalf of Pacific Bell: economic principles for pricing flexibility for Centrex service, Filed November 1990.

Expert Witness on State Transportation Energy Forecasting, California Energy Commission, Sacramento, September 1980.

SELECTED CLIENT REPORTS

Quantifying the Handicaps of Unequal Access, (Confidential) Prepared for Japan Telecom, January 1994.

Overcoming Unequal Access: The International Experience, with S. Krom, (Confidential) Prepared for Japan Telecom, January 1994.

Market Potential For Cellular Radio And Other Personal Communications Products. (Confidential) Prepared for Pac Tel Corporation, July 1990.

Customer Demand for Local Telephone Services: Models and Applications. Prepared for South Central Bell Telephone Company, August 1987.

Evaluation Plans for Conservation and Load Management Programs. Prepared for New England Electric System, July 1987.

Telecommunications Competition for Large Business Customers in New York (Confidential). Prepared for NYNEX Corporation, June 1987.

"Estimation of Residential Conservation Service Program Electricity Savings," Prepared for Southern California Edison Company, July 1984.

The Demand for Local Telephone Service Upon the Introduction of Optional Local Measured Service. In part. Final report, prepared for Southern New England Telephone, July 1982.

Transit Strategies to Improve Air Quality in the Philadelphia Region. In part. Final report prepared for the Delaware Valley Regional Planning Commission, April 1982.

Estimation of Energy Impacts of State Transportation Improvement Program Projects. In part. Final report prepared for the California Energy Commission, January 1982.

Consumer Representation for Transportation Energy Conservation. In part. Final report prepared for the U.S. Department of Energy, July 1981.

Indicators of Supply and Demand for Transportation Fuels. In part. Prepared for the California Energy Commission, December 1980.

State of the Art in Research on Consumer Impacts of Fuel Economy Policies: Recent Findings and Recommendations for Further Research. In part. Prepared for the National Highway Traffic Safety Administration, January 1980.

SELECTED PUBLICATIONS AND PRESENTATIONS

Tardiff, T.J., W.E. Taylor, and C.J. Zarkadas, "Periodic Review of Price Cap Plans: Economic Issues," presented at the Telecommunications Policy Research Conference, Solomons, Maryland, October 2, 1994.

Participant in AGT International Symposium on Local Interconnection Policy, Emerald Lake, British Columbia, Canada, May 27-28, 1994.

Tardiff, T.J., "Effects of Presubscription and Other Attributes on Long-Distance Carrier Choice," Presented at the 1994 National Telecommunications Forecasting Conference, Boston, Massachusetts, May 24, 1994.

Tardiff, T.J., "Access Charges and Toll Prices in the United States: An Economic Evaluation," Presented to representatives of Japanese Long-Distance Companies, New York, New York, May 16, 1994.

Tardiff, T.J. and W.E. Taylor, "Telephone Company Performance Under Alternative Forms of Regulation in the U.S.," presented at the Telecommunications Policy Research Conference, Solomons, Maryland, October 4, 1993.

Tardiff, T.J., "Interconnection and LEC Competitive Services: Pricing and Economic Efficiency," presented at the Telestrategies Conference: The Access Charge Revolution, Washington, D.C. May 18, 1993.

Hausman, J., T. Tardiff, and A. Belinfante, "The Effects of the Breakup of AT&T on Telephone Penetration in the United States," The American Economic Review, Vol. 83, May 1993, pp. 178-184.

Tardiff, T.J., "Assessing the Demand for New Products and Services: Theory and Practice," presented at the NRRI Conference on Telecommunications Demand for New and Existing Services, Denver, Colorado, August 6, 1992.

Tardiff, T.J., "Price and Cost Standards for Increasingly Competitive Telecommunications Services," presented at the Ninth International Conference of the International Telecommunications Society, Sophia Antipolis, France, June 17, 1992.

Tardiff, T.J. "Modeling The Demand For New Products and Services," presented at the NTDS Forum, Santa Fe, New Mexico, September 27, 1991.

Tardiff, T.J. and C. Zarkadas, "Forecasting Tutorial," presented at the National Telecommunications Forecasting Conference, May 29, 1991.

Tardiff, T.J. and W.E. Taylor, "Pricing the Competitive Services of Regulated Utilities," National Economic Research Associates, Working Paper No. 7, May 1991.

Hausman, J.A. and T.J. Tardiff, "Growth in New Product Demand Taking into Account The Effects of Price and Competing Products: Mobile Telecommunications," Presented at the Massachusetts Institute of Technology Telecommunications Business and Economics Program Second Annual Symposium, Cambridge, Massachusetts, November 1990.

Tardiff, T.J., "Structuring Telecommunications in Other Countries: View from the UK, Europe and Canada," Presented at the United State Telephone Association Affiliated Interest Issues Committee 1990 Fall Conference, Traverse City, Michigan, September 1990.

Tardiff, T.J. and M.O Bidwell, Jr., "Evaluating a Public Utility's Investments: Cash Flow vs. Revenue Requirement," Public Utilities Fortnightly, May 10, 1990.

Tardiff, T.J. and C.J. Zarkadas, "Forecasting Demand for New Services: Who, What, and When," Presented at the Bellcore/Bell Canada Demand Analysis Forum, Hilton Head South Carolina, April 1990.

Tardiff, T.J., "Consumer Welfare with Discrete Choice Models: Implications for Flat versus Measured Local Telephone Service," Presented at the Bellcore/Bell Canada Demand Analysis Forum, Hilton Head South Carolina, April 1990.

Tardiff, T.J., Telephone Regulation in California: Towards Incentive Regulation and Competition," Presented to the Bell Canada Economic Council, Hull, Quebec, Canada, February 1990.

Tardiff, T.J., "Measuring Competitiveness in Telecommunications Markets," in National Economic Research Associates, Telecommunications in a Competitive Environment. Proceeding of the Third Biennial Telecommunications Conference, Scottsdale, Arizona, April 1989, pp. 21-34.

Hausman, J.A., T.J. Tardiff, and H. Ware, "Competition in Telecommunications for Large Users in New York," in National Economic Research Associates, Telecommunications in a Competitive Environment. Proceeding of the Third Biennial Telecommunications Conference, Scottsdale, Arizona, April 1989, pp. 1-19.

Perl, L.J. and T.J. Tardiff, "Effects of Local Service Price Structures on Residential Access Demand," Presented at the International Telecommunications Society North American Regional Meeting, Ottawa, Ontario, Canada, June 1989.

Tardiff, T.J. and W.E. Taylor, "Costing Principles for Competitive Assessment," in Telecommunications Costing in a Dynamic Environment, Proceedings of the Bellcore-Bell Canada Conference on Telecommunications Costing, 1989, pp. 497-518.

Tardiff, T.J., "Forecasting the Impact of Competition for Local Telephone Services." Presented at the Bellcore National Forecasting Conference, New Orleans, April 1987.

Tardiff, T.J., "Is Bypass Still a Threat," in National Economic Research Associates, Telecommunications in a Competitive Environment. Proceedings of Conference held in Scottsdale, Arizona, March 1987, pp. 27-41.

Tardiff, T.J., "Benefit Measurement with Customer Choice Models." Presented at the Bellcore Telecommunications Demand Modeling Conferences, New Orleans, October 1985.

Tardiff, T.J., "The Economics of Bypass," Presented at the Bellcore Competitive Analysis and Bypass Tracking Conference. Denver, March 1985.

Tardiff, T.J., "Class of Service Choice Model." Presented at the Telecommunications Marketing Forum. Chicago, September 1984.

Tardiff, T.J., "Demand for New Telecommunications Product and Services." Presented at the Fifth International Conference on Futures Analyses, Forecasting and Planning for Telecommunications. Vancouver, July 1984.

Tardiff, T.J., "Pricing and Marketing in the Competitive Local Access Market." In Present and Future Pricing Issues in Electric, Gas, and Telecommunications Industry. Proceeding of the Ninth Annual Rate Symposium on Problems of Regulated Industries. Columbia: University of Missouri, 1983.

Tardiff, T.J., J. Hausman and A. Baughcum, "The Demand for Optional Local Measured Service." In Adjusting to Regulatory, Pricing and Marketing Realities. Proceedings of the Fourteenth Annual Conference of the Institute of Public Utilities. East Lansing: Michigan State University, 1983.

Tardiff, T.J., W.B. Tye, L. Sherman, M. Kinnucan, and D. Nelson, Application of Disaggregate Travel Demand Models. National Cooperative Highway Research Program Report 253, 1982.

Tardiff, T.J., D. Wyckoff, and B. Johnson, "Shippers' Preferences for Trucking Services: An Application of the Ordered Logit Model." Proceedings of the Transportation Research Forum, Vol. 23, 1982.

Tardiff, T.J., P. M. Allaman, and F. C. Dunbar, New Approaches to Understanding Travel Behavior. National Cooperative Highway Research Program Report 250, 1982.

Tardiff, T.J., E. Ziering, J. Benham and D. Brand, "Energy Impacts of Transportation System Improvements." Transportation Research Record 870: 10-15, 1982.

Tardiff, T.J. and O.S. Scheffler, "Destination Choice Models for Shopping Trips in Small Urban Areas." Proceedings of the Transportation Research Forum, Vol. 22, 1982.

Tardiff, T.J., J.L. Benham and S. Greene, Methods for Analyzing Fuel Supply Limitations on Passenger Travel. National Cooperative Highway Research Program Report 229, 1980.

Tardiff, T.J., "Vehicle Choice Models: Review of Previous Studies and Directions for Further Research." Transportation Research 14A: 327-336, 1980.

Tardiff, T.J., "Specification Analysis for Quantal Choice Models." Transportation Science 13: 179-190.

Tardiff, T.J., "Attitudinal Market Segmentation for Transit Design, Marketing and Policy Analysis." Transportation Research Record 735: 1-7, 1979.

Tardiff, T.J., "Definition of Alternatives and Representation of Dynamic Behavior in Spatial Choice Models." Transportation Research Record 723: 25-30, 1979.

Tardiff, T.J., "Use of Alternative Specific Constants in Choice Modeling." Institute of Transportation Studies, University of California, Berkeley and Irvine, Report No. UCI-ITS-SP-78-6, December 1978.

Tardiff, T.J. and G.J. Fielding, "Relationship Between Social-Psychological Variables and Individual Travel Behavior." Proceedings of the Transportation Research Forum, Vol. 19, 1978.

Tardiff, T.J., T.N. Lam, and B.F. Odell, "Effects of Employment and Residential Location Choices on Urban Structure: A Dynamic Stochastic Simulation." Transportation Research Record 673: 86-93, 1978.

Tardiff, T.J., "Casual Inferences Involving Transportation Attitudes and Behavior." Transportation Research 11: 397-404, 1977.

Tardiff, T.J., "A Note on Goodness of Fit Statistics for Probit and Logit Models." Transportation 5: 377-388, 1976.

Tardiff, T.J., "The Effects of Socioeconomic Status on Transportation Attitudes and Behavior." Ph.D. Dissertation. School of Social Science, University of California, Irvine, 1974.

April 1995

CERTIFICATE OF SERVICE

I hereby certify that I have this 7th day of April, 1995, serviced all parties to this action with a copy of the foregoing COMMENTS reference to CC Docket 95-20, by hand delivery or by placing a true and correct copy of the same in the United States Mail, postage prepaid, addressed to the parties as set forth on the attached service list.

Julia W. Spires

Julia W. Spires

*Common Carrier Bureau
Federal Communications Commission
Washington, D.C 20554

*ITS
Room 140
2100 M Street
Washington, D.C. 20554

Asterisk indicates hand service