

Curriculum Vita

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Personal

Born: February 27, 1950, Detroit, Michigan

Education

2000, Honorary Doctorate: Gothenburg University, Sweden
1977, Ph.D. and M.S.: Syracuse University
1972, B.A.: Kalamazoo College

Employment:

Fall 1998–: Professor of Economics, Oregon State University.
1987-1998: Professor of Economics, Southern Illinois University.
1983-1987: Associate Professor of Economics, Southern Illinois University.
1978-1983: Assistant Professor of Economics, Southern Illinois University.
1977: Instructor of Economics, Southern Illinois University.

Visiting Appointments:

1988-2000: Research Associate, The Swedish Institute for Health Economics, Lund, Sweden.
July-August 2000: Visiting Scholar, Economics, UNSW, Sydney, Australia.
August-December 1996: Kerstin Hesselgren Professor, Sweden.
August-December 1996: Guest Professor, Department of Economics, Göteborg University, Göteborg, Sweden.
July-August 1995: Visitor, Center for Economic Studies, University of Munich, Germany.
January-February 1993: Visiting Professor, Waikato University, Hamilton, New Zealand.
February-March 1993: Visiting Professor, The Australian National University, Canberra, Australia.
July-August 1992: Visiting Scholar, Resources and Technology Division, Economic Research Service, U.S.D.A.,

Washington, D.C.

May-June 1991: Research Associate, Center for Operations Research and Econometrics (CORE),

June-July 1990: Visiting Professor, Bilkent University, Ankara, Turkey.

December 1989: Visiting Fellow, Adelaide University, Adelaide, SA, Australia

Sept.-Nov. 1989: Visiting Fellow, The Australian National University, Canberra, ACT, Australia.

August 1989: Visiting Fellow, LaTrobe University, Bundoora, Vic, Australia.

1984-1985: Visiting Associate Professor of Economics, Vanderbilt University.

References:

Professor Scott Atkinson, Department of Economics, Brooks Hall, University of Georgia, Athens, GA 30602

Professor Kathy Hayes, Department of Economics, Southern Methodist University, Dallas, TX 75275.

Professor R. Robert Russell, Department of Economics, University of California at Riverside, Riverside CA 92521.

Professional Activities:

2003:

Advisory Committee, European Workshop on Efficiency and Productivity

2002, 2004:

Advisory Committee, North American Workshop on Efficiency and Productivity

2001:

Scientific Committee, European Workshop on Efficiency and Productivity

2000-present:

(R. Färe, R. R. Russell), coeditors for *Studies in Productivity and Efficiency*, Kluwer Academic Publishers.

1992-present:

Board of Editors, *Journal of Productivity Analysis*

1997-present:

Editorial Board, *Health Care Management Science*

1986-1992:

Associate Editor, *Journal of Productivity Analysis*.

1981-1982:

Illinois Tax Reform Commission: Consultant for Excise and Consumption Tax Task Force (with K. Hayes).

Areas of Specialization:

Public (State and Local) Finance

Performance Measurement

Labor/Public Employment

Honors and Awards

1977:

Mattersdorf Award (NTA-TIA) for best student in public finance

1996:

Kerstin Hesselgren Chair: awarded by the Swedish parliament in honor of the first woman in the Swedish parliament.

2000:

Honorary Doctorate, Gothenburg University, Sweden.

2002:

Researcher of the Year Award, College of Liberal Arts
Who's Who in Economics

Published Papers:

1. (R. Färe, D. W. Noh, W. Weber), 'Characteristics of a Polluting Technology: Theory and Practice,' *Journal of Econometrics*, forthcoming.
2. (S. Self), 'Factor Accumulation or TFP? A Reassessment of Growth in Southeast Asia,' *Pacific Economic Review*, forthcoming.
3. (E. Ball, R. Färe, O. Zaim and R. Nehring), 'Accounting for Bads in the Measurement of Productivity Growth: A Cost Indirect Malmquist Productivity Measure and its Application to U.S Agriculture,' *Structural Change and Economic Dynamics*, forthcoming.
4. (R. Färe, V. Zelenyuk), 'Aggregation Bias and Its Bounds in Measuring Technical Efficiency,' *Applied Economics Letters*, forthcoming.
5. (R. Färe, V. Zelenyuk), 'Aggregation of Cost Efficiency Indicators and Indexes Across Firms,' *Academic Economic Papers*, forthcoming.
6. (R. Färe, F. Hernandez-Sancho), 'Environmental Performance: An Index Number Approach,' *Resource and Energy Economics*, forthcoming.
7. (R. Färe, G. Whittaker), 'On Value Efficiency and Data Envelopment Analysis,' Special Issue in Honor of W.W. Cooper, *Indian Economic Review*, forthcoming.
8. (R. Färe), "Nonparametric Productivity Analysis with Undesirable Outputs: Comment," *American Journal of Agricultural Economics*, forthcoming.
9. (R. Färe, B. Seldon, V. Tremblay), 'Advertising Efficiency and the Choice of Media Mix: A Case of Beer,' *International Journal of Industrial Organization*, 2004, 503-522.
10. (R. Färe, W. Weber), 'The Effect of Risk-based Capital Requirements on Profit Efficiency in Banking,' *Applied Economics* 36, 2004, 1-13.
11. (R. Färe), "Modeling Undesirable Factors in Efficiency Evaluation: Comment," *European Journal of Operational Research*, 157, 2004, 242-245.
12. (B. Balk, R. Färe), 'The Theory of Economic Price and Quantity Indicators,' *Economic Theory*, 23, 2004, 149-164.

13. (D. Margaritis, V. Valdmanis), ‘Competitive Effects on Teaching Hospitals,’ *European Journal of Operational Research*, 154, 2004, 515-525.
14. (R. Färe, D. Margaritis), ”Productivity Growth in New Zealand: 1978-1998” *New Zealand Economic Papers*, vol 37 (1), June, 2003, pp 93-118.
15. (N. H. Chau and R. Färe), “Trade Restrictiveness and Efficiency,” *International Economic Review*, vol. 44, No. 3, August 2003, 1079-1095.
16. (J.C. Bureau, N. Chau, R. Färe), ‘Economic Performance, Trade Restrictiveness and Efficiency,’ *Review of Development Economics*, vol. 7, No. 4, 527-542, 2003.
17. “Some Remarks on the Malmquist Productivity Index and Its Decomposition,” *Journal of Productivity Analysis*, 20, 2003, 459-474.
18. (R. Färe, V. Zelenyuk), ‘Comment on How not to Measure the Efficiency of Public Services,’ *Journal of the Royal Statistical Society, Series A*, Vol 165, part 3, 429-430, 2002.
19. (R. Färe, D. Margaritis), ”Economic Reform and Productivity Growth: The Case of Australia and New Zealand”, *Mathematics and Computers in Simulation*, 59, 143-152, 2002.
20. (R. Färe, Zaim, O.), ‘Hyperbolic Efficiency and Return to the Dollar,’ *European Journal of Operational Research*, 136, 671-679, 2002.
21. (R. Färe), ‘Two Perspectives on DEA: Unveiling the Link between CCR and Shephard,’ *Journal of Productivity Analysis*, 17:1/2, January 2002, 41-48.
22. (K. Hayes, L. Taylor and W. Weber), ‘On the Determinants of School District Efficiency: Competition and Monitoring,’ *Journal of Urban Economics*, 49, 2001, 453-478.
23. (O. Zaim, R. Färe), ‘An Economic Approach to Achievement and Improvement Indexes,’ *Social Indicators Research*, 56, 2001, 91-118.
24. (R. Färe, D. Margaritis), ‘APEC and the Asian Economic Crisis: Early Signals from Productivity Trends,’ *Asian Economic Journal* 15:3, September 2001, 325-341.
25. (T. Anderson, R. Färe, L. Inman and X. Song), ‘Further Examination of Moore’s Law with data envelopment analysis,’ *Technological Forecasting and Social Change* 69, 1-13, 2001.
26. (R. Färe, W. Weber), ‘Shadow Pricing of Missouri Public Conservation Land,’ *Public Finance Review*, 29:6, November 2001, 444-460.
27. (R. Färe, C. Pasurka), ‘Accounting for Air Pollution Emissions in Measuring State Manufacturing Productivity Growth,’ *Journal of Regional Science*, 381-409, 2001.
28. ((R. Färe and P. Roos), ‘The Use of Indicators for the Measurement of Price and Quantity Changes,’ *Statistics and Democracy*, Statistics Sweden, 2001.
29. (R. Färe, W. F. Lee), ‘Productivity and Technical Change: The Case of Taiwan,’ *Applied Economics*, 33, 1911-1925, 2001.
30. (D. Margaritis, V. Valdmanis) “The Effects of Teaching on Hospital Productivity”, *Socio-Economic Planning Sciences*, 35, 189-204, 2001.
31. (R. Färe), ‘When Can Slacks be used to Identify Congestion? An Answer to W. W. Cooper, L. Seiford and J. Zhu,’ *Socio-economic Planning Sciences*, 35, 217-221, 2001.

32. (J. E. Kirkley, R. Färe, K. McConnell, D. E. Squires and I. Strand) ‘Assessing Capacity and Capacity Utilization in Fisheries when Data are Limited,’ *North American Journal of Fisheries Management*, 21:3, 482-497, August 2001.
33. (R. Färe, D. Margaritis), ‘Productivity Trends in Australian and New Zealand Manufacturing,’ *Australian Economic Review* 34:2, 125-34, 2001.
34. (R. Färe, F. Førsund, K. Hayes, A. Heshmati), “A Note on Decomposing the Malmquist Productivity Index by Means of Subvector Homotheticity,” *Economic Theory* 17, 239-245, 2001.
35. (D. Margaritis, V. Valdmanis), ‘Comparing Teaching and Non-teaching Hospitals: A Frontier Approach (Teaching vs. Non-Teaching Hospitals),’ *Health Care Management Science* 4, 83-90, 2001.
36. (C. Moutray), “Evaluation of School Reform in Chicago Public Schools,” *Economics of Education Review*, vol. 20, no. 1, 2001, 1-14.
37. (D. Boisso, K. Hayes), “Productivity and Efficiency in the U.S.: Effects of Business Cycles and Public Capital,” *Regional Science and Urban Economics*, vol. 30, 2000, 663-681.
38. (R. Färe). ‘Outfoxing a Paradox,’ *Economics Letters*, 69, 2000, 159-163.
39. (R. Färe), “On Separability of the Profit Function,” *Journal of Optimization Theory and Applications*, 2000, 609-620.
40. (R. Färe), “Theory and Application of Directional Distance Functions,” *Journal of Productivity Analysis*, 13, 2000, 93-103.
41. (R. Färe), “Network DEA,” *Socio-economic Planning Sciences*, 34:1, 2000, 35-49.
42. (R. Färe) “Decomposing Technical Efficiency with Care,” *Management Science*, 46:1, 2000, 1667-168.
43. (R. Färe) “Notes on Some Inequalities in Economics,” *Economic Theory*, 15:1, 2000, 227-234.
44. (R. Färe and J. Kirkley), ‘Multi-Output Capacity Measures and Their Relevance for Productivity,’ *Bulletin of Economic Research* 2000, 101-112.
45. (R. Färe) “Slacks and Congestion: A Comment,” *Socio-economic Planning Sciences*, 34:1, 2000, 27-34.
46. (K. Hayes, L. Taylor, and W. Weber) “Anticipating the Consequences of School Reform: A New Use of DEA,” *Management Science*, 45:4, 1999, 608-20.
47. (K. Hayes, L. Taylor and W. Weber), “Allocative Inefficiency and School Competition,” *National Tax Association Proceedings: 91st Annual Conference on Taxation*, 1998, 282-292.
48. (R. Brännlund, Y. Chung, R. and R. Färe) “Emissions Trading and Profitability: The Swedish Pulp and Paper Industry,” *Environmental and Resource Economics*, 1998, 345-356.
49. (R. Färe) “Congestion: a Note,” *Socio-Economic Planning Sciences* 32:1, 1998, 21-23.
50. (R. Färe) “Shadow Pricing of Good and Bad Commodities,” *American Journal of Agricultural Economics* 80, 1998, 584-590.
51. (R. Färe and M. Norris) “Productivity Growth, Technical Progress, and Efficiency Change in Industrialized Countries: Reply,” *American Economic Review*, 87:5, 1997, 1040-1043.
52. (Y.H. Chung and R. Färe) “Productivity and Undesirable Outputs: A Directional Distance Function Approach,” *Journal of Environmental Management*, 51, 1997, 229-240.

53. (R. Färe) "Profit Efficiency, Farrell Decompositions and the Mahler Inequality," *Economics Letters*, 57, 1997, 283-287.
54. (R. Färe, B. Lindgren, J. P. Poullier) "Productivity Growth in Health Care Delivery: A Comparison of OECD Countries," *Medical Care*, 35:4, 1997, 354-366.
55. (R. Färe, R. Grabowski and S. Kraft), "Efficiency of Fixed but Allocatable Inputs: A Non-Parametric Approach," *Economics Letters*, 56, 1997, 187-193.
56. (K. Hayes, L. Taylor and W. Weber) "Budget-Constrained Frontier Measures of Fiscal Equality and Efficiency in Schooling," *Review of Economics and Statistics*, 79:1, February 1997, 116-124.
57. (R. Färe, E. Grifell-Tatjé, C.A.K. Lovell), "Biased Technical Change and the Malmquist Productivity Index," *Scandinavian Journal of Economics*, 99:1, 1997, 119-127.
58. "Statistical Inference and Nonparametric Efficiency: A Selective Survey," *Journal of Productivity Analysis* 7, 1996, 161-176.
59. (R. Chambers, R. Färe), "Productivity Growth in APEC Countries," *Pacific Economic Review*, 1:3, December 1996, 181-190.
60. (R. Färe, P. Roos) "On Two Definitions of Productivity," *Economics Letters*, 53, 1996, 269-274.
61. (J. Clement, V. Valdmanis) "A Comparison of Shadow Prices and Reimbursement Rates of Hospital Services," *Annals of Operations Research*, 67, 1996, 163-182.
62. (R. Färe, R. Althin) "Profitability and Productivity Changes: An Application to Swedish Pharmacies," *Annals of Operations Research*, 66, 1996, 219-230.
63. (R. Färe) "Productivity and Intermediate Products: A Frontier Approach," *Economics Letters*, 50, 1996, 65-70.
64. (R. Färe, D. Tyteca) "An Activity Analysis Model of the Environmental Performance of Firms—application to fossil-fuel-fired electric utilities," *Ecological Economics*, 18, 1996, 161-175.
65. (J. C. Bureau, R. Färe) "Nonparametric Measures of Productivity Growth in European and U.S. Agriculture," *Journal of Agricultural Economics*, 1995, 309-326.
66. (R. Färe), "Nonparametric Tests of Regularity, Farrell Efficiency and Goodness-of-Fit," *Journal of Econometrics*, 69, 1995, 415-425.
67. (K. Hayes, J. Hirschberg), "Fiscal Stress and the Production of Public Safety: A Distance Function Approach," *Journal of Public Economics* 57, 1995, 277-296.
68. (R. Brännlund, R. Färe) "Environmental Regulation and Profitability: An Application to Swedish Pulp and Paper Mills," *Environmental and Resource Economics* 6, 1995, 23-36.
69. (R. Färe, W.-F. Lee) "Productivity in Taiwanese Manufacturing Industries," *Applied Economics*, 27, 1995, 259-265.
70. (D. Margaritis and V. Valdmanis) "Estimating Output Substitutability of Hospital Services: A Distance Function Approach," *European Journal of Operational Research*, 80, 1995, 575-587.
71. (R. Färe, P. Roos) "Productivity and Quality Changes in Swedish Pharmacies," *International Journal of Production Economics*, 39, 1995, 137-144.
72. (R. Färe, P. Roos) "Productivity and Quality Changes in Swedish Pharmacies: Reply," *International Journal of Production Economics*, 39, 1995, 147.

73. (R. Färe) "Measuring Productivity: A Comment," *International Journal of Operations and Production Management*, 14:9, 1994, 83-88.
74. "Discussion: Linear Programming Approaches to the Measurement and Analysis of Productive Efficiency," *TOP* 2:2, 1994, 51-56.
75. (R. Färe) "Estimation of Returns to Scale Using Data Envelopment Analysis: A Comment," *European Journal of Operational Research*, 79, 1994, 379-382.
76. (R. Färe, M. Norris, Z. Zhang) "Productivity Growth, Technical Progress and Efficiency Change in Industrialized Countries," *American Economic Review*, 84:1, March 1994, 66-83.
77. (R. Chambers, R. Färe) "Efficiency, Quantity Indexes and Productivity Indexes: A Synthesis," *Bulletin of Economics Research*, 46:1, January 1994, 1-22.
78. (G. Ferrier, K. Hayes, S. Yaisawarng) "Economics of Diversification in the Banking Industry: A Frontier Approach," *Journal of Monetary Economics*, 31, 1993, 229-249.
79. (M. English, K. Hayes, S. Yaisawarng) "Output Allocative and Technical Efficiency of Banks," *Journal of Banking and Finance*, 17:2-3, April 1993, 349-366.
80. (V. Valdmanis) "Evaluating Hospital Performance with Case Mix Adjusted Outputs," *Medical Care*, 31:6, 1993, 525-532.
81. (K. Hayes) "Local Public Sector Bureaucrats and Their Input Choices," *Journal of Urban Economics*, 33, 1993, 151-166.
82. (R. Färe, C.A.K. Lovell, S. Yaisawarng) "Derivation of Shadow Prices for Undesirable Outputs: A Distance Function Approach," *Review of Economics and Statistics*, 1993, 374- 380.
83. (K. Hayes and S. Yaisawarng) "Measuring Economies of Diversification: A Frontier Approach," *Journal of Business Economics and Statistics*, 10:4, 1992, 453-459.
84. (R. Färe, C.A.K. Lovell) "Indirect Productivity Measurement," *Journal of Productivity Analysis* 2, 1992, 283-298.
85. (R. Färe, B. Lindgren, P. Roos) "Productivity Changes in Swedish Pharmacies 1980-1989: A Non-parametric Malmquist Approach," *Journal of Productivity Analysis* 3, 1992, 85-101.
86. (R. Färe) "Malmquist Productivity Index and Fisher Ideal Indexes," *The Economic Journal* 102:410, 1992, 158-160.
87. (R. Färe, S.K. Li) "Linear Programming Models for Firm and Industry Performance," *The Scandinavian Journal of Economics*, 1991, 599-608.
88. (R. Färe) "A Distance Function Approach to Price Efficiency," *Journal of Public Economics* 43, 1990, 123-126.
89. (R. Färe, S. Yaisawarng, S. Li, Z. Wang) "Productivity Growth in Illinois Utilities," *Resources and Energy* 12, 1990, 383-398.
90. (R. Färe) "The Fisher Ideal Index and the Indirect Malmquist Productivity Index: A Comparison," *New Zealand Economic Papers* 24, 1990, 66-72.
91. (D. Margaritis, V. Valdmanis) "Nurse Productivity and Wages," *New Zealand Economic Papers* 24, 1990, 73-86.

92. (S. Yaisawarng) "Economies of Scope in the Provision of Local Public Services," *National Tax Journal* 43, March 1990, 61-74.
93. (R. Färe, J. Nelson) "On Price Efficiency," *International Economic Review*, 1990, 709-720.
94. (R. Färe, H. Lee) "A Nonparametric Approach to Expenditure Constrained Profit Maximization," *The American Journal of Agricultural Economics*, 1990, 574-581.
95. (R. Färe, C.A.K. Lovell, C. Pasurka) "Measuring Efficiency when some Outputs are Undesirable: A Nonparametric Approach," *Review of Economics and Statistics* 71:1, 1989, 90-98.
96. (R. Färe, W. Weber) "Measuring School District Performance," *Public Finance Quarterly* 17:4, 1989, 409-428.
97. (R. Färe, V. Valdmanis) "Capacity, Competition and Efficiency in Hospitals: A Nonparametric Approach," *Journal of Productivity Analysis* 1, 1989, 123-128.
98. (R. Färe, E. Kokkelenberg) "Measuring Plant Capacity Utilization, and Technical Change: A Non-parametric Approach," *International Economic Review*, 1989, 655-666.
99. (R. Färe, C. Pasurka) "The Effect of Environmental Regulations on the Efficiency of Electric Utilities: 1969 vs. 1975," *Applied Economics* 21, 1989, 225-235.
100. (R. Färe, C.A.K. Lovell) "An Indirect Approach to the Evaluation of Producer Performance," *Journal of Public Economics* 37, 1988, 71-89.
101. (R. Färe, C.A.K. Lovell) "Scale Elasticity and Scale Efficiency," *Zeitschrift für die gesamte Staatswissenschaften* 144, No. 4, September 1988, 721-729.
102. (R. Färe, D. Njinkeu) "On Piecewise Reference Technologies," *Management Science* 34, No. 12, December 1988, 1507-1511.
103. (P. Byrnes, R. Färe, C.A.K. Lovell) "The Effect of Unions on Productivity: U.S. Surface Mining of Coal," *Management Science* 34, No. 9, September 1988, 1037-1053.
104. (K. Hayes, S. Porter-Hudak) "Pension Funding and Local labor Costs: A Dynamic Analysis of Illinois Police Pension Funds," *Southern Economic Journal* 54, No. 3, January 1988, 572- 82.
105. (P. Byrnes, R. Färe, S. Kraft) "Technical Efficiency and Size: The Case of Illinois Grain Farms," *European Review of Agricultural Economics* 14, No. 4, 1987, 395-412.
106. (V. Valdmanis) "Measuring Hospital Performance: A Nonparametric Approach," *Journal of Health Economics* 6, 1987, 89-107.
107. (R. Färe, C.A.K. Lovell) "Nonparametric Disposability Tests," *Zeitschrift für Nationalökonomie* 47, 1987, 77-85.
108. (R. Färe, J. Logan) "The Comparative Efficiency of Western Coal-Fired Steam-Electric Generating Plants: 1977-1979," *Engineering Cost and Production Economics* 11, 1987, 21-30.
109. (K. Hayes) "The Demand for Local Public Goods: Choosing an Appropriate Functional Form," *Applied Economics* 18, November 1986, 1179-1192.
110. (R. Färe, C.A.K. Lovell) "Scale Economics and Duality," *Zeitschrift für Nationalökonomie* 46, No. 2, 1986, 175-182.
111. (R. Färe, C. Pasurka) "Effects on Relative Efficiency in Electric Power Generation Due to Environmental Controls," *Resources and Energy* VIII, No. 2, 1986, 167-184.

112. "The Role of the Reference Technology in Measuring Productive Efficiency," *The Economic Journal*, 96, June 1986, 499-513.
113. (P. Byrnes, K. Hayes) "Efficiency and Ownership: Further Evidence," *Review of Economics and Statistics* 68, No. 2, May, 1986, 337-341.
114. (R. Färe) "A Nonparametric Cost Approach to Scale Efficiency," *Scandinavian Economic Journal* 87, No. 4, 1985, 594-604.
115. (P. Byrnes, K. Hayes) "How 'Exact' Are Exact Measures of Welfare Loss?" *Applied Economics* 17, December 1985, 1071-1081.
116. (K. Hayes, T. Kennedy) "The Supply and Demand Effects of Underfunding of Pensions on Public Employee Wages," *Southern Economic Journal* 51, No. 3, January, 1985, 745-753.
117. (K. Hayes) "Measuring the Welfare Loss of Pension Mandates: A Methodology and Example," *Public Finance Quarterly* 13, No. 1, January 1985, 47-62.
118. (R. Färe, R. Grabowski) "Technical Efficiency of Philippine Agriculture," *Applied Economics* 17, 1985, 205-214.
119. (R. Färe, J. Logan) "The Relative Performance of Publicly Owned and Privately Owned Electric Utilities," *Journal of Public Economics* 26, 1985, 89-106.
120. (R. Färe) "Productive Efficiency in U.S. Manufacturing: A Generalized Linear Programming Approach," *Methods of Operations Research* 48, 1984, 497-515.
121. (K. Hayes) "The Role of Functional Form in Estimating the Demand for Local Public Goods," *Review of Economics and Statistics* 66, No. 1, February 1984, 169-173.
122. (P. Byrnes, R. Färe) "Measuring Productive Efficiency: An Application to Illinois Strip Mines," *Management Science* 30, No. 6, June 1984, 671-681.
123. (R. Färe, J. Logan) "The Relative Efficiency of Illinois Public Utilities," *Resources and Energy* 5, 1983, 349-367.
124. (R. Färe) "Measuring Congestion in Production," *Zeitschrift für Nationalökonomie* 43, No. 3, 1983, 257-271.
125. (R. Färe, C.A.K. Lovell) "The Structure of Technical Efficiency," *Scandinavian Journal of Economics* 85, No. 2, 1983, 181-190.
126. (K. Hayes, D. Sivan) "Municipal Pensions, Funding, and Wage Capitalization," *National Tax Journal* 36, March 1983.
127. (R. Färe) "Measuring Output Efficiency," *European Journal of Operational Research* 13, 1983, pp. 173-179.
128. (K. Hayes) "Reimbursement of State Mandates: A Method for Establishing Costs," *State and Local Government Review* 15, Fall 1983, 102-105.
129. (R. Färe, B. Yoon) "A Theoretical and Empirical Analysis of the Highway Speed-Volume Relationship," *Journal of Urban Economics* 12, 1982, 115-121.
130. "The Revenue Potential of a Site Value Tax: Extension and Update of a General Equilibrium Model with Recent Empirical Estimates of Several Key Parameters," *American Journal of Economics and Sociology* 40, No. 2, April 1981, 207-215.

131. "Public Employment's Impact on the Future of Urban Economies," *Urban Government Finance* 20, 1981, Roy Bahl, ed., 39-62.
132. (M. Gellerson) "Public Utility Pricing, Investment and Reliability Under Uncertainty: A Review," *Public Finance Quarterly* 8, No. 4, October 1980, 477-792.
133. (M. Gellerson and R. McHugh) "Cyclical Stability of the New Urban Economic Base," *Northeast Regional Science Review* 9, 1979, 30-37.

Papers in Proceedings and Book Reviews:

1. (R. Färe, 'Primal and Dual Measures of Capacity Utilization,' *PICMET*, Proceedings Vol. 2 (1999).
2. Review of *Industrial Price, Quantity and Productivity Indices: the Micro-Economic Theory and an Application*, by B. M. Balk, for *Zeitschrift für Nationalökonomie*, 71:3, 2000, 324-325.
3. (R. Färe, P. Roos), "Profit, Productivity and Quality: A Directional Distance Function Approach," in *Register Statistics, Respondent Costs, and Survey Process Improvement*, Proceedings of the 2nd International Conference on Methodological Issues in Official Statistics, Stockholm September 23-24, 1996, 55-61, ISBN 91-618-0873-3.
4. Review of *Productivity* by Dale Jorgenson, for *Zeitschrift für Nationalökonomie*, forthcoming. (with Jean-Christophe Bureau)
5. Review of Economic Efficiency of the Organizational Decisions of the Firm, R.T.V.S. Rao, for *Zeitschrift für Nationalökonomie* 54:1, 1991, 73-75.
6. (R. Färe) "Sharing Functions and Clubs, A Note," MVEA Proceedings VIII, 1982, 172-174.
7. (K. Hayes, D. Sivan) "The Wage-Pension Trade Off: The Case of Illinois Municipal Policemen," Proceedings of the 12th Annual Meeting of the Illinois Economic Association, 1982, 197-204.
8. (K. Hayes) "Underfunding of Municipal Employee Pension Plans," Proceedings of the 11th Annual Meeting of the Illinois Economic Association, 1981, 99-104.
9. "City Life-Cycles and Municipal Expenditure Contrasts: Comment," National Tax Association Proceedings, 1977, 332-334.

Books and Monographs:

1. (R. Färe, C.A.K. Lovell) *The Measurement of Efficiency of Production*, Kluwer-Nijhoff Publishing, Boston (1985).
2. (R. Färe) *Cost and Revenue Constrained Production*, Bilkent University Lecture Series, Springer-Verlag, Berlin (1994).
3. (R. Färe, C.A.K. Lovell) *Production Frontiers*, Cambridge University Press, Cambridge (1994).
4. (R. Färe) *Intertemporal Production Frontiers*, Kluwer-Nijhoff, 1996.
5. (R. Färe and R. R. Russell), eds., *Index Numbers: Essays in Honor of Sten Malmquist*, Kluwer Academic Publishers, Boston, 1998.
6. (R. Färe), *Efficiency and Productivity: New Directions*, Kluwer Academic Publishers, Boston, 2004.

Contributions to Books:

1. (R. Färe, G. Whittaker), ‘Distance Functions with Applications to DEA,’ W.W. Cooper, L.M. Seiford, J. Zhu, eds, *Handbook on Data Envelopment Analysis*, Kluwer Academic Publishers, 2004.
2. (W.F. Lee, R. Färe), ‘Property Rights and Profitability,’ in *New Directions: Efficiency and Productivity*, by R. Färe and S. Grosskopf, Kluwer Academic Publishers, Boston, 2004, 65-77.
3. (R. Färe, O. Zaim), ‘An Index Number Approach to Measuring Environmental Performance: An Environmental Kuznets Curve for the OECD Countries,’ in *New Directions: Efficiency and Productivity* Kluwer Academic Publishers, Boston, 2004, 77-89.
4. (R. Färe, D. Margaritis), “Productivity, Growth and Macroeconomic Policy,” in F. N. De Simone and A. Chin (eds.) *Monetary and Fiscal Policy in Singapore*, forthcoming, McGraw Hill.
5. (R. Färe, P. Roos), ‘Integrating Consumer Satisfaction into Productivity Index,’ K. Fox (ed.) *Efficiency in the Public Sector*, Kluwer Academic Publishers (2002) 201-217.
6. (E. Ball, R. Färe, F. Hernandez-Sancho, R. Nehring), ‘The Environmental Performance of the U.S. Agricultural Sector,’ V. Elton Ball and George W. Norton (eds.), *Agricultural Productivity: Measurement and Sources of Growth*, Kluwer Academic Publishers, 2002, 257-276.
7. (E. Ball, R. Färe, R. Nehring) ‘Productivity of the U.S. Agricultural Sector: The Case of Undesirable Outputs,’ C.R. Hulten, E.R. Dean and M.J. Harper (eds.), *New Developments in Productivity Analysis*, University of Chicago Press, 2001, 541-586.
8. (K. Hayes, L. Taylor and W. Weber), ‘Input Regulations and Allocative Efficiency in U.S. Public Schools,’ J.L.T. Blank (ed.) *Public Provision and Performance: Contributions from Efficiency and Productivity Measurement*, North-Holland, 2000, 175-190.
9. (B. Sloboda), ‘Nonparametric Density Estimation of the Net Benefits of Southern Illinois University on the State of Illinois by the Human Capital Model,’ R. Carter Hill and Tom B. Formby, (eds), *Advances in Econometrics: Applying Kernel and Nonparametric Estimation to Economic Topics*, 14, 1999, 179-200.
10. (R. Färe, P. Roos), “Price Indexes for Nonmarketed Goods,” in Georg Westermann, ed., *Data envelopment analysis in the service sector*, Deutscher Universitäts-Verlag, Wiesbaden, 1999.
11. (R. Färe) “Efficiency and Productivity in Rich and Poor Countries”, in Bjarne Jensen and Kar Yiu Wang, eds., *Dynamics, Economic Growth and International Trade*, Ann Arbor: Michigan University Press, 1997, 243-264.
12. (R. Färe and P. Roos), “On Malmquist Productivity Indexes,” in R. Färe, S. Grosskopf and R.R. Russell, eds *Index Numbers: Essays in Honor of Sten Malmquist*, Kluwer Academic Publishers, Boston, 1998.
13. (R. Färe, D. Margaritis), “Productivity Change in the New Zealand Manufacturing Sector: 1979-91, in *A Study of Economic Reforms: the Case of New Zealand*, B. Silverstone, A. Bollard, R. Lattimore, eds, North-Holland, 1996, 73-100.
14. (R. Färe, S. Yaisawarng) “Intertemporal Budgeting and Efficiency,” in *Intertemporal Production Frontiers*, by R. Färe and S. Grosskopf, Kluwer-Nijhoff Academic Publishers, Newton, MA, 1996.
15. (R. Färe, Y.He, J. Horvath) “Industrial Productivity Growth in China:1980-84 vs 1984-85” in *Intertemporal Production Frontiers*, by R. Färe and S. Grosskopf, Kluwer-Nijhoff Academic Publishers, Newton, MA, 1996.

16. (R. Färe, B. Lindgren, P. Roos) "Productivity Developments in Swedish Hospitals: A Malmquist Output Index Approach," in *Data Envelopment Analysis: Theory, Methodology and Applications*, A. Charnes, W.W. Cooper, A. Lewin, L. Seiford (eds.) Kluwer-Nijhoff, 1994, 253-272.
17. (R. Färe, P. Roos) "Den Offentliga Sektorns Produktivitetsutveckling inom Sjukhussektorn 1970-1992," *Den Offentliga Sektorns Produktivitetsutveckling 1980-1992* DS, 1994 3-27.
18. (R. Färe) "Theory and Calculation of Productivity Indexes," *Models and Measurement of Welfare and Inequality*, W. Eichhorn (ed.) Springer Verlag (1994), pp. 921-940.
19. (R. Färe) "Nonparametric Tests for Cost Constrained Technologies," in *Mathematical Modelling in Economics*, W.E. Diewert, K. Spreman and F. Stehling (eds.), Springer-Verlag, Berlin (1993), pp. 142-148.
20. "Efficiency and Productivity," ed. H. Fried, C.A.K. Lovell, and S. Schmidt, *The Measurement of Productive Efficiency: Techniques and Applications*, Oxford University Press, Oxford, 1993, 160-194.
21. (R. Färe, B. Lindgren, P. Roos) "Productivity Changes in Swedish Pharmacies 1980-1989: A Non-Parametric Malmquist Approach," *International Applications of Productivity and Efficiency Analysis*, T. Gullege and C.A.K. Lovell (eds.) Kluwer Academic Publishers (1992), pp. 81-97. (Also published in Journal of Productivity Analysis.)
22. (R. Färe) "Measuring Shadow Price Efficiency," *Applications of Modern Production Theory: Efficiency and Productivity*, ed. A. Dogramaci and R. Färe, Kluwer-Nijhoff, 1988.
23. (R. Färe, J. Logan, C.A.K. Lovell) "Measuring Efficiency in Production: With an Application to Electric Utilities," *Managerial Issues in Productivity*, ed. A. Dogramaci and N. Adam, Kluwer-Nijhoff Publishing, 1985, 185-214.
24. (R. Färe, C.A.K. Lovell) "The Structure of Technical Efficiency," *Topics in Production Theory*, ed. F. Forsund, MacMillan Press, London, 1984, reprinted from The Scandinavian Journal of Economics, 1983.
25. (M. Johnson) "Land Value Tax Revenue Potentials: Methodology and Measurement," in R. Lindholm and A. Lynn, eds. *Land Value Taxation: The Progress and Poverty Centenary*, Published for the Committee on Taxation, Resources, and Economic Development by the University of Wisconsin Press, 1982, 41-68.
26. (J. Burkhead) "Recent Trends in Public Employment and Compensation," in R. Bahl, J. Burkhead, B. Jump (eds.) *Public Employment and State and Local Government Finance*, 1980, Cambridge: Ballinger Publishing Company, 1-30.
27. "Labor Force Characteristics of Public Employees" *Ibid.*, 31-64.

Government Documents:

1. (K. Hayes) "Report to the Excise and Consumption Taxes Task Force," Tax Reform Commission, State of Illinois, December 1982.
2. (D. Arey and G. Provenzano) "The Prospects for Controlled Trading of Air Pollution Rights in the Metro East Area of Illinois," Illinois Institute of Natural Resources, Document No. 81/26, August, 1981.

3. (D. Arey, et al.) "PSD: A Study to Determine the Potential Effects of Reclassifying Portions of Madison, Monroe and St. Clair Counties from Class II to Class III," Illinois Environmental Protection Agency, 1980.
4. (J. Myers, et al.) "The Impact of Western Coal on the Illinois Economy," for the Attorney General of Illinois, 1979.
5. (D. Arey, J. Crenshaw, O. Ervin, J. Myers, W. Patula) "Prevention of Significant Deterioration of Air Quality: An Analysis of Policy Alternatives in Illinois," Coal Extraction and Utilization Research Center and the Illinois Environmental Protection Agency, 1979.

Grant Activity:

1979:

"Prevention of Significant Deterioration of Air Quality," with D. Arey, et al., for the Ford Foundation.
 "The Economic Impact of Western Coal on the Illinois Economy," for the Attorney General of Illinois (contributor), J. Myers, et al.

1980:

"Prevention of Significant Deterioration: A Study to Determine the Potential Effects of Reclassifying Portions of Madison, Monroe and St. Clair Counties from Class II to Class III (contributor), IEPA, December 1980.

1981:

Controlled Trading in Air Pollution Rights in the Metro-East Area of Illinois," with D. Arey and G. Provenzano, Illinois Institute of Natural Resources.

1987:

SIU Summer Research Award.

1988-91:

"Expenditure Constrained Profit Maximization," ERS-USDA, with R. Färe.

1991-92:

"Accounting for Inefficiency in Agricultural Productivity," ERS-USDA, with R. Färe.
 "Can America Compete? An International Comparison of Productivity, Innovation and Efficiency Change," Center for International Business and Culture, with R. Färe.

1993-

"Agricultural Productivity When Some Outputs are Undesirable," USDA, ERS, with R. Färe.

1994-96

"Frontier Production and Environmental Issues" USEPA, with R. Färe.

1995-96

"Estimation of Environmental and Economic Effects of Production Using Survey Data," USDA, ERS, with R. Färe.

1997-98

"Application of Frontier Production Models to Environmental Issues," USEPA, with R. Färe.

1999-00: “Effect of Accounting for Undesirable Environmental Effects on Farm Income,” ERS/USDA, with R. Färe.

2002-2005 ‘Modelling Enterprise Efficiency, Innovation and Growth,’ New Zealand Foundation for Research, Science and Technology, with R. Färe and D. Margaritis.

Doctoral Dissertations Under My Direction:

P. Byrnes (1985) “Ownership and Efficiency in U.S. Utilities” (Co-chair).

D. Njinkeu (1988) “A Monte Carlo Comparison of Alternative Measurements of Returns to Scale in Non-stochastic Models” (Co-chair).

W. Weber (1988) “Estimating Demand Prices for Public Goods From Private Aggregate Demand Functions (Co-chair).

S. Yaisawarng (1989) “Measuring Short-Run Price Efficiency: Theory and Application” (Co-chair).

C.S. Kim (1995) “Productivity Change, Efficiency Change and Technical Change in the Newly Industrializing Countries”.

Chad Moutray (1996) “Assessing the Performance of Market-Based Education Reforms.”

Brian Sloboda (1997) “The Economic Impact of Southern Illinois University on the State of Illinois: The Human Capital Approach”.

V. Zelenyuk, (2002) ‘Essays in Productivity and Efficiency Analysis of Economic Systems,’ (Co-chair).

Dong Wong Noh (2002) “Essays on Applied Microeconomics.” (co-chair)

Doctoral Dissertations: External Examiner

Magnus Tambour (1997) “Essays on Performance in the Health Care Sector” Stockholm University, Stockholm, Sweden .

Staffan Waldo (2003) “Essays on Education Performance,” University of Lund, Sweden.

Refereeing

Agricultural Economics

American Economic Review

American Journal of Agricultural Economics

Annals of Operations Research

Annals of Public and Cooperative Economics

Applied Economics

Bulletin of Economic Research

Canadian Journal of Economics

Contemporary Economic Policy

Eastern Economic Journal

Economica

Economic Development and Cultural Change

Economic Inquiry
Economics Letters
The Energy Journal
Environment and Development Economics
Environmental and Resource Economics
European Economic Review
European Journal of Operational Research
Health Care Management Science
Health Economics
International Economic Review
International Journal of Production Economics
International Journal of Manpower
International Tax and Public Finance
Journal of Agricultural Economics
Journal of Business Economic and Statistics
Journal of Comparative Economics
Journal of Development Economics
Journal of Economic Education
Journal of Economic Development
Journal of Economic Behavior and Organization
Journal of Econometrics
Journal of Economic Theory
Journal of Environmental Economics and Management
Journal of Health Economics
Journal of Human Resources
Journal of Productivity Analysis
Journal of Public Economics
Journal of Risk and Insurance
Journal of Urban Economics
Land Economics
Management Science
Managerial and Decision Economics
National Science Foundation
National Tax Journal
Omega
Policy Studies Journal
Public Choice
Public Finance Review
Quarterly Journal of Business and Economics
Regional Science and Urban Economics
Research Council of Canada
Resource and Energy Economics
Scandinavian Journal of Economics
Small Business Economics
Southern Economic Journal
The Economic Journal
The Manchester School
The Review of Economics and Statistics
Zeitschrift für Nationalökonomie

1 Papers under Review

1. (R. Färe, C. Pasurka), ‘Stated vs revealed Abatement Costs: The Case of Electric Utilities,’ submitted to *JEEM*, 2004.
2. (T. Anderson, R. Färe, X. Song), ‘Examining Moore’s Law Using Data Envelopment Analysis,’ submitted to *IEEE Transactions on Engineering Management*, Spring 2001.
3. (R. Färe, F. Førsund, K. Hayes, A. Heshmati) “Productivity and Quality in Swedish Schools,” revised and resubmitted to *Journal of Quality Assurance in Education*, 2004.
4. (R. Färe, V. Zelenyuk), ‘An Optimistic Note on Aggregation of Efficiency Indices,’ 2001.
5. (R. Färe, V. Zelenyuk), ‘Finding Common Ground: Efficiency Indexes,’ revised 2002.

Unpublished Discussion Papers

1. (R. Färe, S. C. Ray, S. M. Miller, K. Mukherjee), ‘Difference Measures of Profit Inefficiency: An Application to U.S. Banks,’ January 2000.
2. (D. Vaughn-Aiken, R. Färe, C. Pasurka), ‘Least Cost Air Pollution Control: A CGE Joint Production Framework,’ 2003.
3. (R. Färe, K. Hayes, L. Taylor), ‘Dynamic Efficiency: Is the Public Sector Investing too Little?,’ 2003.
4. (S. Self, O. Zaim), ‘To What Extent is the Efficiency of Public Health Expenditure Determined by the Status of Health?’ 2003.
5. (G. Boyd and R. Färe,), “International Productivity Growth with CO_2 as an Undesirable Output,’ OSU, 1999.
6. (M. Davis, K. Hayes, J. Hirschberg) “Safety Services: Implicit Valuation by Type of Crime,” mimeo, revised 1996.
7. (R. Färe, P. Roos), “Productivity in a Network”, mimeo, 1996.
8. (R. Färe), “Cost Functions and Undesirable Outputs,” Dept. of Economics, Oregon State University, 1998.
9. (Rolf Färe, Pontus Roos), ‘Price Index Methodology for Pharmaceutical Products,’ 2000.
10. (K. Hayes, L. Taylor), ‘Productivity, Innovation and Diffusion in the United States: Can Policy Put the States on the Technology Frontier?’, Dec. 2001.
11. (C. Tremblay, K. Yang), ‘Manic Depression, Occupational Choice and Creativity,’ revised, May 2004.
12. (R. Färe, R. Sickles), ‘Productivity? Of U.S. Airlines after Deregulation,’ fall 2001.
13. (R. Färe), ‘Optimization Models Applied to Productivity and the Environment,’ Fall 2001.

Recent Conferences

1999:

- (R. Färe, J. Kirkley), “Multi-Output Capacity Measures and Their Relevance for Productivity,” Conference on Productivity in U.S. Fisheries, University of Maryland and NMFS, College Park, MD, Feb.
- (R. Färe), “Primal and Dual Measures of Capacity”, PICMET meetings, Portland, OR, July 25-28.
- (R. Färe, N. Chau), “Trade Restrictiveness and Efficiency,” METU Conference, Ankara, Turkey Sept.
- (K. Hayes, L. Taylor, W. Weber), “On the Determinants of School District Efficiency: Competition and Monitoring,” 6th European Workshop on Productivity and Efficiency, Copenhagen, Denmark, October.
- (K. Hayes, L. Taylor), “Competition and Efficiency: The Impact of Charter Schools on Public School Performance,” Southern Economics Assoc., New Orleans, LA, Nov.

2000:

- (E. Ball, R. Färe, F. Hernandez-Sancho and R. Nehring) ‘The Environmental Performance of the U.S. Agricultural Sector,’ Agricultural Productivity: Data, Methods and Measures, ERS/USDA, Washington DC, March 9-10.
- (K. Hayes, L. Taylor) ‘Competition and Efficiency: the impact of charter schools on public school performance’, The American Education Finance Association, Austin, March 9-11.
- (R. Färe, S.C. Ray, S.M. Miller, K. Mukherjee), ‘Difference Measures of Profit Inefficiency: An Application to U.S. Banks,’ Miguel Hernandez University: Banking and Finance Workshop, Alicante, Spain, 2000.
- (K. Hayes and L. Taylor), ‘The effect of charter schools on public school performance,’ NAPW, Union College, June 2000.
- (L. Connolly), ‘The Effect of Welfare Reform on the Performance of Nonprofit Organizations,’ NAPW, Union College, June 2000.
- ‘Comment on Kent Kunze address,’ NAPW, Union College, June 2000.
- (K. Kerstens, J. Kirkley, R. Färe, and D. Squires), ‘Assessing Short-Run and Medium-Run Fishing Capacity at the Industry Level and its Reallocation,’ IEFET conference, July 2000.
- (R. Färe, F. Hernandez-Sancho), ‘Environmental Performance: An Index Number Approach,’ New Zealand Econometric Study Group Meeting, Christchurch, New Zealand, July 2000.

2001:

- (R. Färe, C. Pasurka), ‘Stated vs Production Costs of Regulation: The Case of Electric Utilities,’ ASSA meetings, New Orleans, Jan. 2001.
- (R. Färe, B. Seldon, V. Tremblay), ‘Advertising Efficiency and the Choice of Media Mix: A Case of Beer,’ WEA meetings, San Francisco, July 2001
- (S. Self), ‘Growth, Human Capital and TFP,’ WEA meetings, San Francisco, July 2001
- ‘Some Remarks on Productivity and its Decomposition,’ Exclusive Workshop on DEA, University of South Denmark, Odense, Denmark, Sept. 2001
- (R. Färe, R. Sickles), ‘Productivity? Of U.S. Airlines after Deregulation,’ 7th Workshop on Efficiency and Productivity, Oviedo, Spain, Sept. 2001
- (R. Färe, O. Zaim), ‘An Economic Approach to Achievement and Improvement Indexes,’ 7th Workshop on Efficiency and Productivity, Oviedo, Spain, Sept. 2001
- (R. Färe), ‘Optimization Models Applied to Productivity and the Environment,’ Brazilian Society of Operations Research, Campos de Jordao, Brazil, Nov. 2001
- (C. Tremblay), ‘Manic Depression, Occupational Choice and Creativity,’ SEA meetings, Nov. 2001
- (R. Färe), ‘The Practice of Production Theory in Environmental Economics,’ Occasional California Workshop on Environmental and Resource Economics Economics, Santa Barbara Oct. 2001

2002

- (K. Hayes, L. Taylor), ‘Productivity, Innovation and Diffusion in the United States: Can Policy Put the States on the Technology Frontier?’, CSWEP session, ASSA meetings, Atlanta, Jan. 2002.

(R. Färe, C. Pasurka), ‘Environmental Regulations and Traditional Measures of Productivity: A Joint Production Perspective,’ AERE session, ASSA meetings, Atlanta, Jan. 2002.

(K. Hayes, L. Taylor), ‘Competition and Efficiency: the Impact of Charter Schools on Public School Performance,’ North American Productivity Workshop, Schenectady, NY, June 20-22.

(R. Färe, V. Zelenyuk), ‘Finding Common Ground: Efficiency Indexes,’ North American Productivity Workshop, Schenectady, NY, June 20-22.

(R. Färe, C. Pasurka), ‘Stated vs Revealed Approaches to Measuring Pollution Abatement Costs,’ Second World Congress of Environmental and Resource Economics, Monterey, June 23-27.

(R. Färe, W. Weber), ‘Shadow Prices and Pollution Costs in U.S. Agriculture,’ Second World Congress of Environmental and Resource Economics, Monterey, June 23-27.

(R. Färe, V. Zelenyuk), ‘Aggregation of Cost Efficiency Indicators and Indexes across Firms,’ Asia Conference on Efficiency and Productivity Growth, July 19-20.

(K. Hayes, L. Taylor), ‘Competition and Efficiency: the Impact of Charter Schools on Public School Performance,’ Asia Conference on Efficiency and Productivity Growth, July 19-20.

(K. Hayes, L. Taylor), ‘Productivity, Innovation and Diffusion in the United States: Can Policy Put the States on the Technology Frontier?’, Asia Conference on Efficiency and Productivity Growth, July 19-20.

2003

(S. Self, O. Zaim), ‘To What Extent is the Efficiency of Public Health Expenditure Determined by the Status of Health?’, ASSA meetings, CSWEP session, January.

(K. Hayes, L. Taylor), ‘Competition and Efficiency: the Impact of Charter Schools on Public School Performance,’ SEA Meetings, Nov.

(R. Färe, K. Hayes, L. Taylor), ‘Dynamic Efficiency: Is the Public Sector Investing too Little?’, European Conference on Efficiency and Productivity, Oviedo, Spain, September.

2004

(D. Vaughn-Aiken, R. Färe, C. Pasurka), ‘Least Cost Air Pollution Control: A CGE Joint Production Framework,’ ASSA , San Diego, CA.

Recent Invited Seminars

1999:

University of California at Davis.

The Institute for the Study of Labor Market Policy, Uppsala, Sweden.

Federal Reserve Bank of Dallas.

Bilkent University, Ankara, Turkey.

2000:

University of New South Wales, Sydney, Australia

The Institute for the Study of Labor Market Policy, Uppsala, Sweden.

2001:

The Institute for the Study of Labor Market Policy, Uppsala, Sweden.

Workshop on Efficiency and Duality, Barcelona, Spain.

University of South Denmark, Odense, Denmark.

Brazilian Society of Operations Research, Campos de Jordao, Brazil.

2002:

Miami University, Oxford, Ohio.

National Cheng-Chi University, Taipei, Taiwan.

University of Tilburg, The Netherlands, Workshop on Productivity.

2003:

University of Patras, Patras, Greece, HEWPEM, keynote address, 'Modelling a Pollution Technology: Theory and Practice'.

Ulvön, Sweden, invited paper, Workshop in honor of Karl-Gustaf Löfgren, 'Environmental Performance in Swedish Manufacturing,' with R. Brännlund, R. Färe, M. Lindmark,

University of California, Riverside, Workshop in Honor of Robert Russell, 'Finding Common Ground: Efficiency Indices,' with R. Färe, V. Zelenyuk.

2004:

(P. Bogetoft, R. Färe, K. Hayes, L. Taylor) 'Dynamic Efficiency: Is the Public Sector Investing too Little?', special workshop, Copenhagen, DK, June 10. (K. Hayes, L. Taylor), 'Competition and Efficiency: the Impact of Charter Schools on Public School Performance,' APPC, Brisbane Australia, July.

(N. Chau, R. Färe), 'Trade Restrictiveness and Pollution,' APPC, Brisbane Australia, July.