

David Paul Vogt, Ph.D.
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Positions and Employment

Distinguished R&D Staff Member, Environmental Sciences Division, Oak Ridge National Laboratory, 2004 - present

Adjunct Professor of Economics, University of Tennessee, 2002 - present

Program Leader, Regional Studies Program 1990 - present

Leader, Resource and Environmental Economics Group, Energy and Economics Analysis Section, Energy Division 1983 - 1990

Regional Economics Program Manager, Economics Section, Energy Division 1982 - 1983

Research Staff Member, Economics Section, Energy Division 1979 - 1982

Research Associate, Economics Section, Energy Division 1975 - 1979

Assistant Professor, Hobart and William Smith Colleges, Geneva, New York, 1971 - 1975

Education B.S., University of Rochester, 1965
 M.A., Economics, Maxwell School, Syracuse University, 1970
 Ph.D., Economics, Maxwell School, Syracuse University 1974

Research and Leadership Summary:

Dr. Vogt is the manager of the Regional Studies Program of the Environmental Sciences Division at Oak Ridge National Laboratory. His primary research has focused on regional economic analysis and computer modeling system to support integrated national/regional assessments and policy decision making. Shortly after his arrival at ORNL in 1975, Dr. Vogt build one of the earliest U. S. regional energy consumption and production accounts and projections systems in a project for the Economic Development Administration. This energy data was developed for BEA (sub-state labor market) areas to be consistent with MULITREGION an economic and demographic regional model also being developed at ORNL at that time. During the late seventies, these two systems supported analysis of the impact of energy shortages on regional economic growth. The tools and techniques developed in this work were subsequently used in a large number of integrated regional assessments conducted for the Department of Energy during the early 80's. Dr. Vogt has conducted regional model reviews and integrated economic assessment implementation studies for EPA and DOE's Office of Emergency Contingency Planning.

During the 90's, Dr. Vogt designed and implemented a series of U.S. regional economic assessments systems for the Federal Emergency Management Agency to estimate the capacity loss from nuclear attack. These systems were also used to provide early estimates of the scale of damage from natural disasters. The Integrated Management and Economic Analysis System (IMEASY) provided the first

computer based damage assessment used by FEMA in establishing the need for a federal response to Hurricane Hugo. The use of the computer assessment for Hurricane Hugo, rather than waiting for the traditional bottoms up assessments, expedited federal assistance for damage by two weeks. Information from the system also was used by FEMA to direct priority visual damage assessment of critical defense manufacturing facilities following the Point Loma earthquake in California.

The Regional Recruiting Potential Model, a system Dr. Vogt and his team designed and implemented for the Army National Guard, facilitates each state's assessment of local communities present and future ability to support army guard units. The system has been used in the field for over twenty years. Recent and continuing analysis work for the guard has been directed towards analysis of guard membership and recruiting patterns. This research is expected to help formulate strategies for regional force structure assignments and efficient recruiting resource allocation.

Expanding on the traditional multi-regional modeling framework, Dr. Vogt and Dr. Frank Southworth have recently integrated the ORNL multi-modal network, ORNL spatial interaction model and the ORNL regional studies regional input-output model into a county-to-county multi-regional modeling framework. The first application (Maritime Input-Output Model) of the framework conducted for the Army Corps of Engineers was an analysis of the economic benefits from improvements to the Saint Lawrence Seaway.

Other recent work related to decisions support tools and regional transportation. One such tool has been the development of a risk assessment model for the Office of the Chief Financial Officer of the Department of Education that estimates the level of improper expenditures for grant programs. The procedure is intended to fulfill the statistical sampling and analysis requirements of the Improper Payments Information Act of 2002, while minimizing the burden of the sampling requirements on the Department of Education. Working with transportation specialists at ORNL's National Transportation Research Center, Dr Vogt has explored interregional freight flows, urban and rural transit systems and other areas that bridge the paradigms of inter-regional modeling and transportation systems analysis.

Dr. Vogt has written more than 100 papers, book chapters, technical reports and project background papers. He has conducted over 150 project briefings and dozens of workshops. These papers, briefings and workshops span a wide range of interest in economics, modeling and use of empirical based analysis in a policy assessment context.

Selected Publications:

Books

Waste-to-Energy in the United States: A Social and Economic Assessment, T.R. Curlee, S. Schexnayder, D. P. Vogt, A. K. Wolfe, D. L. Feldman, and M. P. Kelsay, Quorum Books, New York, 1994.

Selected Journal Articles and Book Chapters

"An Overview of MULTIREGION: A Simulation-Forecasting Model of BEA Economic Area Population and Employment", (with R. J. Olsen, et al.), *Proceedings of the Seventh Annual Pittsburgh Conference on Modeling and Simulation*, April 1976, Instrument Society of America, School of Engineering,

University of Pittsburgh.

"The Regional Economic Impact of Changes in Import Oil Prices," (with D. J. Bjornstad and D. N. Stuckwisch), *The Review of Regional Studies*, Vol. 9, No. 3, Winter 1979.

"Improving the SEAS Regional Capability", *Proceedings of a Regional Economic Modeling Workshop*, United States Environmental Protection Agency (EPA), EPA-600/9-80-037, August 1980.

"The Incidence of Coal Severance Taxes: Political Perceptions and Economic Realities," (with R. B. Shelton), *Natural Resources Journal*, Vol. 22, No. 3, July 1982.

"Some Comments Relating to model Specification of 'Effects of Nuclear Power Plants on Residential Property'," (with D. J. Bjornstad), *Journal of Regional Science*, Vol. 24 No. 1, 1984.

"Integrated Data Base Analysis and Modeling for Damage Assessment", (with D. Arnurius and A. Katzman), *Conference Proceedings: Advanced Computing for the Social Sciences*, ORNL and Department of the Commerce, Bureau of the Census, Williamsburg, Virginia, April 1990.

"National Infrastructure Information System/Regional Impact Module", M93-66935, Vogt, D. P., and W. L. Jackson, Oak Ridge National Laboratory, Oak Ridge, Tenn., October, 1993.

"Incorporating Environmental Justice into Environmental Decision Making," *Environmental Challenges: The Next 20 Years*. NAEP 20th Annual Conference Proceedings, (with Amy K. Wolfe, et al), National Association of Environmental Professionals, pp. 277-285, 1995.

"Medical Costs and Lost Productivity from Health Conditions at Volatile Organic Contaminated Superfund Sites", *Environmental Research, Section A, 7,9-19 (1998)*, with Lyberger, et al.

"Rural Transit Systems Benefits in Tennessee: Methodology and an Empirical Study," T.R. Curlee, Frank Southworth and David Vogt, *Environment and Planning A*. Volume 37, pp. 861-875, 2005

"The Economic Foundations of the Ohio River Navigation Investment Model (ORNIM)." T.R. Curlee, Ingrid Busch, Michael Hilliard, Gbadebo Oladosu, Frank Southworth, and David Vogt, *Transportation Research Record*. #1871, pp. 13-24, 2004.

"Estimation of Statewide Urban Public Transit Benefits in Tennessee." T.R. Curlee, Frank Southworth and David Vogt, *Transportation Research Record*, Journal of The Transportation Research Board, National Research Council, #1887, 2004.

Selected Reports

MULTIREGION: A Simulation-Forecasting Model of BEA Economic Area Population and Employment, R. J. Olsen et al., ORNL/RUS-25, (October 1977).

Energy Availabilities for State and Local Development, Volumes I-VII, (with P. L. Rice, et al.).(1977-1980)

"Improving the SEAS Regional Capability", *Proceedings of a Regional Economic Modeling Workshop*,

United States Environmental Protection Agency (EPA), EPA-600/9-80-037, August 1980.
"Some Comments Relating to model Specification of 'Effects of Nuclear Power Plants on Residential Property'," (with D. J. Bjornstad), *Journal of Regional Science*, Vol. 24 No. 1, 1984.

Regional Impacts of Uranium Employment Decline: A Provisional Appraisal, D. P. Vogt, C. G. Rizey, and R. A. Watson, ORNL/TM-9356 (July 1985).

Promoting Self-Sustaining Economic Development in Russia Through Oil Federalism: Potential and Pitfalls, David J. Bjornstad, Barabara Hardy, David P. Vogt, Jill Caviglia, Ivars Gutmanis, Prepared for the U.S. Department of Energy., Office of Energy Intelligence, Energy Assessments Division, (June 1995).

"Development of the Maritime Input-output Model, Phase 1", **The Great Lakes St. Lawrence Seaway Navigation Study, Reconnaissance Report, Appendix A Econ, ATTACHMENT 5, Maritime Input-Output Model**, February 12, 2002, David Paul Vogt, Frank Southworth, Bruce Peterson, Colleen Rizey, Army Corps of Engineers, Detroit District, May 1, 2002.
http://www.lre.usace.army.mil/index.cfm?chn_id=1063

Demand for and Benefits of Public Transit Services in Tennessee, T. R. Curlee, Frank Southworth and David P. Vogt, ORNL Report MO2-114048, June 2002.

"The 2002 Freight Analysis Framework Freight Flow Database: Development of a Set of Commodity and Mode Specific Origin-to-Destination Freight Flow Matrices for the United States." Lead author. T. R. Curlee, S. M. Chin, Ho-Ling Hwang, Gbadebo Oladosu, Maxine Perry, Bruce Peterson, Richard Schmoyer, Frank Southworth, and David Vogt. Report delivered to the Federal Highway Administration, December 2006.

"Urban Transit in Tennessee, Efficiency Frontiers, and the Benefits of Marginal Investments." Final Report. Prepared for the Research Development and Technology Program, Tennessee Department of Transportation. Lead author, T.R. Curlee, Frank Southworth and David Vogt, June 2006.

An Assessment of Future Demands for and Benefits of Public Transit Services in Tennessee. Frank Southworth, David P. Vogt, and T. Randall Curlee," ORNL/TM-2002/55, sponsored by the Tennessee Department of Transportation, 2001.

Preliminary Estimates of the Medical Costs and Lost Earnings from Illnesses that have Elevated Rates at Superfund Sites with Known Human Exposure to Volatile Organic Compounds, T.R. Curlee, Russell Lee, David P. Vogt, et al., draft report for ATSDR, May 1995.

Draft Reconnaissance Study - Great Lakes System Navigation Review, ATTACHMENT 5 Maritime Input/Output Model, (Development of the Maritime Input-output Model, Phase 1, Application in the Great Lakes/St. Lawrence Seaway Navigation Reconnaissance Study, February 12, 2002, David Paul Vogt, Frank Southworth, Bruce Peterson, Colleen Rizey), Army Corps of Engineers, Detroit District, May 1, 2002. http://www.lre.usace.army.mil/index.cfm?chn_id=1063 Draft.