ECONorthwest
ECONOMICS • FINANCE • PLANNING

Randall Pozdena, Senior Director and Economist

Ph.D. Economics, University of California, Berkeley
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Randall Pozdena leads ECONorthwest's quantitative analysis practice. He joined ECONorthwest as a Managing Director and head of its Portland office in 1991. He has extensive experience in transportation economics, banking and securities markets, real-estate economics, monetary policy, and macro-economic modeling and forecasting. He leads ECONorthwest's specialized transportation economics practice. In this capacity, he has developed and applied transportation project evaluation and pricing tools, and state, regional, and sectoral macroeconomic forecasting and economic impact models.

Prior to joining ECONorthwest, Randall was Research Vice President of the Federal Reserve Bank of San Francisco. He directed the Banking and Regional Studies section, which advised on matters relating to financial-market developments, mortgage and housing markets, banking operations and regulation, and the regional economy of the western United States. The latter duties involved developing and operating models of states and metropolitan-area economies and analysis of credit flows in the economy.

Before his work at the Federal Reserve Bank, Randall was a Senior Economist at SRI International, where he provided consulting on economics, finance, and transportation economics. In addition, he has taught economics and finance at the Graduate School of Business, University of California, Berkeley and at the Graduate School of Administration, University of California, Irvine. He was also associated with the Institute of Transportation Studies at Irvine. Randall has held CFA Institute certification for nearly 20 years.

He is a member of the Portland Society of Financial Analysts and a former board member of that organization. He has written over 50 published books and papers, has 21 listings in the Journal of Economic Literature, and over 5,000 search cross-references in Google Research.

Representative Projects

Randall Pozdena has served as Project Director on the following projects, unless otherwise noted:

TRANSPORTATION PROJECT EVALUATION AND PRICING ANALYSIS

Randall has been doing research, writing, and consulting on the subject of transportation economics for 30 years. His specialty is pricing and investment policy. He was the first economist to propose congestion pricing as a practical policy in the California Transportation Policy Plan. His contribution to this plan was recently re-published in a 30th anniversary version. He wrote a primer on congestion pricing for ODOT in 1995, built a congestion pricing

strategy for highway cost allocation into ODOT's 2000 Highway Cost Allocation Study, and developed means of modifying existing travel modeling suites to incorporate congestion pricings, as well as travel time reliability, and other innovations.

He and a colleague contributed to preparation of internal, ODOT procedures needed to implement Oregon's adoption of road pricing policy in enabling law. He has also developed practical means of setting optimal congestion tolls for both Oregon Metro and the Puget Sound Regional Council. In the latter case, he assisted the PSRC in evaluating a wide variety of toll policy alternatives, including freeway-only tolling, cordon tolling, ubiquitous pricing, and selective project and lane tolling options.

He and his colleagues at ECONorthwest also expanded on his dissertation work to develop ways of setting tolls on managed lane facilities through development of the Toll Optimization Model and toll test bench procedures. The TOM procedures have been applied in over two-dozen project settings. In addition, Randall led ECONorthwest's team that implemented a region-wide tolling policy demonstration in the Puget Sound. This demonstration employed GPS and cellular technologies applied in a real world setting. This project, known as the Traffic Choices project, is regarded as the premier experimental implementation of congestion pricing to date, since it required addressing very practical problems of toll setting, user billing, privacy considerations, and technology costs and benefits. The following are selected project engagements in this practice:

- Development of a congestion pricing manual for the Oregon DOT.
- Revision for NCHRP in 2002 of the 1976 AASHTO Highway User Benefit.
- Manual (Redbook), with Carl Batten, to include computer "wizard" tools.
- Expansion of the AASHTO Redbook to include non-user benefits and costs (2008).
- Development of a method for on-the-fly calculation of efficient, ubiquitous tolls within 4-step models. First installed on Metros modeling platform in 1999-2000; now implemented widely in the US.
- Developed for Boulder, Colorado, a small city travel model that optimized dispatch of buses and proliferation of bus routes.
- Developed options-theoretic models for valuing the option demand value of transit services (for TCRP transit benefit-cost manual).
- Developed, with others, ECONorthwest's Toll Optimization Model (TOM), a proprietary model for simultaneous optimization of pricing and loading of highway facilities. Over two dozen client applications.
- Development of a method for emulating the effect of congestion pricing implementation on Oregon's Highway Cost Allocation process.
- Development and implementation for clients a method for valuing the delay-equivalent value of travel uncertainty.
- Development and implementation of a method of testing the FAIR procedure for providing equitable access to tolled highway facilities (for Alameda County CMA).

- Development of revenue forecasts for a proposed monorail system, Seattle, WA.
- Evaluation of several dozen HOT lane or other tolling implementations for Portland Metro, Puget Sound Regional Council, LA Metro, Sonoma County, Denver, Charlotte, Tennessee DOT, SFCTA, Salt Lake City, Marin County, etc.
- Development of a bench-testing procedure for dynamic tolling algorithms for the soon-to-open, I-680 HOT lane.
- Development of a literature synthesis on the relationship between patterns of settlement (land use) and energy use and GHG emissions.
- Development of a BVAR model of the dual-direction causality of VMT and economic growth, fuel prices, and evolution of fleet fuel efficiency.
- Development of a sketch planning tool for estimating the impact on carbon emissions of regional transportation improvements (for FHWA).
- Analysis of the consumer understanding of new vehicle fuel efficiency labels (for PRR and EPA).
- Development of sketch benefit-cost tool for evaluating opportunities for priced and unpriced managed lane conversions or additions.
- Development of an econometric long-term VMT and fleet forecasting model for California and each county (for CalTrans).
- Development of a pure Electric Vehicle market penetration model (for WA Dept of Commerce and others).

FINANCIAL AND REAL ESTATE MARKET RESEARCH

Randall's background in financial and real estate market research includes 14 years of leading the Federal Reserve Bank of San Francisco's banking and regional economics unit, as research Vice President. In this role, Randall monitored, studied, and published research about financial intermediation processes and market credit conditions. As an adjunct to UC Berkeley's business school, he also taught finance and securities courses.

Randall has extensive background in real estate economics and finance. He is the author of a textbook on real estate finance, and has taught courses in real estate finance and economics. His work spans the gamut of the field, with experience developing methods for pricing mortgages, predicting housing activity and pricing, and analyzing the role of real estate owned (REO) and mortgage backed debt in the banking sector. He has analyzed the market potential for a wide variety of real estate projects, including hotels, commercial office, motor fuel retail outlets, etc. He also assists banks and health care organizations in locating new branches or clinics.

He is also an experienced practitioner of finance. For nine years, he served on the Oregon Investment Council, the body that managed the assets of the then $40 billion Oregon PERS assets and, as its chair, helped lead the fund to the rank of the best-performing public fund with assets over $1 billion. He has served on numerous other private and non-profit entities investment committees. He was an Advisory Limited Partner in a major, national venture capital fund, and is a Limited Partner in a commodities arbitrage hedge fund. He also assists

public debt underwriters and issuers, and most recently is the co-author of a major study of a major study on the cost of public debt issuance.

His practice includes evaluation of project and lender risk, and development of financing strategies for new enterprises and projects. He uses his knowledge of credit intermediation processes to develop regional macroeconomic forecasting models, and in more than a decade of service to the Oregon Governor's Council of Economic Advisors. He was one of the first economists to warn of the Savings and Loan crisis in the late 1980s, and the risks of the credit democratization policies of the mid-1990s that yielded the 2000 burst of the so-called housing bubble. The following are selected consulting engagements in real estate and finance:

- Credit scoring modeling.
- Analysis of mortgage application treatment in mortgage discrimination claims.
- Evaluation of bank mergers and acquisitions.
- Evaluation of market for home equity lines of credit and second mortgage products.
- Determinants of venture capital and IPO activity in the high-technology sector.
- Determinants of pricing and activity in the commercial office market.
- Defense of predatory pricing litigation regarding ACH service pricing.
- Behavior of prices and start activity in residential housing.
- Evaluation of cash demand associated with ATM use.
- Pricing and management of cash deposit demand at Reserve Banks.
- Pricing mortgage prepayment options (model in use in private financial sector).
- Risk evaluation, 24-hour operation of funds transfer network, Fedwire Task Force.
- Evaluation of Japanese payment clearing processes, FRBSF/Bank of Japan.
- Analysis of competition in U.K. financial service industry.
- Analysis of German financial service industry.
- Implications of junk bond market and high-leverage transaction lending by banks.
- Determinants of declining commercial bank market share in commercial lending.
- Financial product design, Merrill Lynch Fenner and Smith.
- Determinants of venture capital and IPO activity in the high-technology sector.
- Determinants of pricing and activity in the commercial office market Valuation of municipalized public utility transaction, Springfield Utility Board.
- Analysis of economic impact of refinery investments, Kenai Peninsula, Alaska.
- Model of corn shipping pat terns, and effects of labor agreement, private client.
- Feasibility analysis, downtown Portland hotel, private client.
- Market feasibility analysis, major recreational development, private client.

- Market feasibility analyses, commercial and residential development, private clients.
- Feasibility analyses for bank branch expansions, private clients.
- Statistical analysis of demand for office space in Clackamas County, private client.
- Effects of energy-efficiency building codes on new home sale prices, Oregon.
- Analysis of the job and revenue impacts of proposed personal and corporate income tax rates.
- Analysis of the feasibility of new branches, for various regional and national depository institutions.
- Analysis of the effect of the 2008 financial market disturbances on access to credit on property valuations.
- Analysis of the effect of the housing market decline in 2007-2008 on builder profits and product absorptions.
- Analysis of the 2008 recession on the value and volume of industrial real estate transactions.

MACROECONOMIC MODELING AND FORECASTING

The macroeconomic forecasting practice led by Randall provides specially-tailored forecasts for public, private, and litigation clients. The forecast and impact models incorporate state-of-the-art mathematical and statistical specifications and, where requested, include special modules to disaggregate activity by sector at various levels of resolution. This practice also includes supply-chain and final demand synergy modeling based on input-output representations either alone, or in combination with statistical or computed regional model representations. Selected, relevant accomplishments in this area include the following:

- Development and operation of models of the national economy. This includes contributions to the models operated by the Federal Reserve Bank of San Francisco used for briefing the president of the bank prior to Federal Open Market Committee meetings.
- A national model tailored to the special forecasting requirements of private clients in the forest products and housing industries.
- Development of various state macroeconomic models for the states comprising the 8-of the national economy, vehicle-miles traveled, and fleet fuel efficiency. The model was developed for the BiPartisan Center of the US Congress.
- Development and operation of a model of the Puget Sound regional economy, with emphasis on forecasting transportation revenue sources.
- Development and operation of a model of the three-county TriMet transit district. The model is tailored to the forecasting of payroll tax revenues and selected district cost factors. This model has an average 18-quarter-ahead forecast error of only 2.5 percent.
- Development of a state-level VMT forecasting model for the State of California and its constituent counties (underway).

- Development of numerous county-level forecasting models for local governments and special districts. These are customized to accommodate special tax or other forecast requirements.
- Development of forecasts of rail-transit rights-of-way costs and other transit development or operating cost elements.

Selected Honors and Activities

- *The Modern Economics of Housing*—Author
- Governor's Council of Economic Advisors—Member
- Portland State University—Adjunct Professor of Real Estate Finance
- Oregon Investment Council (1992-2001)—Member and Chair
- Oregon Symphony Endowment Fund—Investment Committee Member
- Pacific University—Investment Advisory Board Member
- Association for Investment Management and Research (AIMR)—Member
- Portland Society of Financial Analysts—Board Member
- Council of Economic Advisors, Metro (Portland)—Member
- Regional Economic Analysis Project (Portland)—Advisory Committee Member
- Oregon Department of Environmental Quality—Committee on Lender Liability Member
- Building Advisory Council (1992/1993 term), City of Portland—Member
- Public Affairs Forum, California Chamber of Commerce—Advisory Committee Former Member
- California State Transportation Policy Planning Task Force—Former Member
- HUD Study of Small Public Employee Retirement—Advisory Committee Former Member
- Governor's Earthquake Preparedness Task Force—Former Member
- Bay Area Economic Forum—Steering Committee Former Member
- Journal of Buyouts and Acquisitions—Former Contributing Editor