

Education

Ph.D. Economics and
Politics, Claremont Graduate
University

M.A. International Political
Economy, Claremont
Graduate University

B.A. Economics, Whittier
College

Years at ECONorthwest: 9

Years in Industry: 15

Areas of Expertise

Real Estate Economics

Land Use and Transportation

Regional Economics

Business Analytics

Expert Testimony

Michael Wilkerson, Ph.D., Partner & Senior Economist

Dr. Michael Wilkerson is a Partner and the Director of Analytics at ECONorthwest. He brings over 15 years of private-sector experience as an economic consultant and as an analyst in the financial services industry. Mike studies urban economics for both public and private sector clients—with a focus on land use, transportation, and real estate development and how they interact with the regional economy. Using a data-driven approach that focuses on spatial analysis, he conducts housing market analyses, development feasibility studies, TOD implementation studies and master plans, economic impact analyses, and provides expert testimony. He regularly presents at national conferences on topics related to real estate economics, including the American Planning Association, the National Multifamily Housing Council, and the Urban Land Institute. Mike is currently an adjunct professor in the Master of Real Estate Development program at Portland State University.

REPRESENTATIVE PROJECTS

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

Real Estate, Land Use, Transportation

- **Underproduction of Housing Reports for CA, OR, and WA— Nationwide (Ongoing).** Led the research efforts for the Up For Growth state reports quantifying the amount of housing underproduction in California, Oregon, and Washington. Evaluated the impact of an accessible growth strategy, measuring the economic, fiscal, and environmental benefits compared to the status quo growth pattern.
- **Affordable Middle-Income Housing Advisory Council— Seattle, WA (Ongoing).** Research policy solutions, evaluate development feasibility for different development prototypes, provide recommendations to revise existing housing development tools. Produce strategic report outlining the recommendations and policy options for the City of Seattle to consider in support of incentivizing and encouraging more housing that is affordable to middle-income Seattle households.

- **TriMet SW Corridor Planning—Portland, OR (2019–Ongoing).** Provide planning and urban design assistance for the SW Corridor light rail project, station area planning, calculate the impacts of transportation investments on financial feasibility in the planned corridor.
- **Broadway Corridor Master Plan—Portland, OR (Ongoing).** Working as part of a cross disciplinary team to design and implement a master plan on behalf of Prosper Portland on the former USPS site in the Central City. Modeled the financial feasibility of different design concepts, provided calculations of benefits and costs associated with the implementation of a Community Benefits Agreement
- **Molbaks Master Plan—Woodinville, WA (Ongoing).** Collaborate with a cross disciplinary team to evaluate the financial feasibility and public private partnership options as part of a master plan for a private landowner.
- **City of Hood River Housing Market Study—Hood River, OR (Ongoing).** Produce a report outlining the current housing affordability challenge in the City, including identifying the impact of second and investment homes, and how limited production will impact affordability in the future. Policy options will be outlined in the context of the current market conditions, including impact to land prices, and the ability to deliver more units of housing that are affordable to households earning less than the Area Median Income.
- **Tukwila Housing Action Plan- Tukwila, WA (2021).** ECONorthwest assessed housing needs and gaps based on community, housing market, commuting, and job trends. We assessed the existing plans and policies associated with housing to inform areas of improvement and needed housing actions. The project team prepared a housing action plan in accordance with HB 1923, including a housing needs analysis, evaluation of policies, strategies for improving housing development, and an implementation plan. This work builds off the South King County Regional Housing Action Plan, of which Tukwila is one of the six cities. ECO worked with the city to develop a housing strategy focused on Transit-Oriented Development.
- **FAR Transfer Bank Feasibility Analysis—Portland, OR (2019).** Working with Prosper Portland and the City of Portland Bureau of Planning and Sustainability, evaluated the feasibility of creating a FAR transfer program that would monetize unused City owned development rights and make them available for transfer and use in the Central City by private developers.
- **Oregon Statewide Brownfield Tax Credit Analysis—Statewide (2019).** Analyzed various tax credit programs for Metro to determine if they are able influence financial feasibility of the inventory of known brownfield sites throughout the State of Oregon.
- **Construction Defect Liability Legislative Policy Analysis—Statewide (2019).** Worked with a coalition of affordable housing industry stakeholders to analyze the current construction defect liability statutes in Oregon. Proposed a set of policy options to increase the possibility of producing more affordable condominium product throughout the state.
- **Central Oregon Association of Realtors Quarterly Reports—Bend, OR (2019).** Produce a quarterly market report analyzing trends in single-family homes sales and development in Central Oregon, including the creation of a regional housing index.

- **Seattle Cost of Development Analysis—Seattle, WA (2018).** For a private foundation, conducted a study of development impact fees in the Seattle region and their impact on housing feasibility and affordability.
- **Bellevue East Main Zoning Analysis—Bellevue, WA (2018).** Analyzed for the City of Bellevue the design and calibration of an incentive zoning program as part of a master plan site adjacent to a planned transit improvement.
- **National Housing Underproduction Study—National (2018).** Partnered with the Up For Growth National Coalition to produce a study measuring the economic and fiscal impacts associated with housing under production nationally. Different growth scenarios were constructed to measure the impact on economic growth, the fiscal impacts for local and federal government, and the environmental and land use impacts of different density models.
- **Vertical Housing Development Zone Displacement Analysis—Beaverton, OR (2018).** Analyzed the potential for direct and indirect displacement of residents in the proposed VHDZ, including measuring any price impacts observed in all VHDZ statewide.
- **Austin CodeNEXT Comprehensive Code Revision—Austin, TX (2018).** Designed an interactive planning tool called Incentives Lab to analyze the impacts of alternative affordable housing density bonus policies on new development. Working with the consultant team and City staff, crafted an affordable housing policy that balanced development feasibility with community affordable housing goals. Developed a toolkit that identified incentives (such as tax abatements) that could work in concert with the density bonus policy to encourage the production of privately developed affordable units.
- **Port of Hood River Property Asset Strategy—Hood River, OR (2018).** For the Port of Hood River, assessed the economic value current real estate assets, and evaluated debts and other financial obligations to help develop a strategy for property disposition, leasing, and acquisition.
- **St. Helens Apartment Market Analysis—St. Helens, OR (2018).** Collaborated with a private developer and City staff to conduct a market analysis, including pro forma and predicted rent analysis to determine the feasibility of constructing different building prototypes in downtown St. Helens.
- **Hood River Development Feasibility Analysis—Hood River, OR (2018).** For the Port of Hood River, created a financial model with several scenarios to test development feasibility on a waterfront area site.
- **College Housing NW Market Study—Portland, OR (2017).** Conducted a technical study that assessed the market feasibility of a new, 16-story student housing project in downtown Portland, OR. Calculated both the competitive supply of student housing, including market housing in the downtown area, and of university enrollment data to evaluate demand for the additional supply of housing.
- **2016 Portland Streetcar Corridor Analysis—Portland, OR (2017).** For Portland Streetcar Inc., ECONorthwest calculated the change in Real Market Value of all properties located inside the streetcar corridor since 2000 (a 1/4 buffer). We also calculated the total amount of new housing units produced and the number of affordable housing units produced.

- **PDC/PHB Broadway Corridor Affordability Analysis—Portland, OR (2017).** ECONorthwest assisted the Portland Development Commission and the Portland Housing Bureau in understanding the implications of Inclusionary Housing Policy in addition to existing affordability targets on development feasibility in the Broadway Corridor area. Work included using development prototypes and testing scenarios with different percentages of affordable housing units at different income targets to determine the impact on residual land value.
- **Portland Streetcar LID Update—Portland, OR (2017).** Calculated housing units and total development inside the Portland Streetcar LIDs.
- **Gresham Housing Policy—Gresham, OR (2017).** Provided assistance to the City of Gresham on reviewing and updating their housing policy to evaluate the impact of policies on the production and affordability of housing in the City.
- **City of Portland Inclusionary Housing Policy—Portland, OR (2017).** Worked as part of consultant team and City staff to design and calibrate the recently adopted inclusionary housing policy. Coordinated with a technical advisory panel of industry experts to determine appropriate market-based assumptions utilized to calibrate incentive offsets for mandatory affordable unit set asides.
- **Issaquah Mixed-Use Development Feasibility—Issaquah, WA (2017).** Modeled the near-term real estate and development market dynamics, to gain an understanding that will allow the City to enact tools (codes, policies, incentives) to improve the likelihood that future development meets the long-term vision of more dense, mixed-use building types.
- **OMSI Campus Master Plan—Portland, OR (2017).** Worked as part of a larger design team in the creation of a master development plan for the museum’s 17-acre waterfront property. Estimated current land values under various fee and ground lease alternatives, as well as future feasibility and market value of alternative scenario options.
- **Minneapolis Upper Harbor Terminal Redevelopment—Minneapolis, MN (2017).** Working for a three-partner development team, plan a mixed-use development anchored by a proposed 8,000 seat amphitheater and waterfront park. Assist crafting a framework plan for the site, negotiating a development agreement with the city, provide financial feasibility and fiscal impacts analysis.
- **Zidell South Waterfront Master Plan—Portland, OR (2017).** Assisted Zidell Realty in development of a master plan for their 33-acre waterfront property. ECONorthwest contributed to the financial feasibility model, the market analysis, economic impacts, and alternative financing including TIF projections.
- **Mid America Regional Council—Kansas City, MO (2017).** As part of a transit corridor study, calculated the impact of BRT and Streetcar for a range of economic development indicators, including rent, amount of development, and jobs.
- **Portland Streetcar System Expansion Study—Portland, OR (2016).** Working on a multidisciplinary team, conducted an economic analysis to calculate the development impacts and possible funding strategies including tax increment finance and local improvement districts, for five proposed streetcar expansion alignments.

- **Austin South Central Waterfront Framework Plan—Austin, TX (2016).** Worked with the City of Austin on a development strategy for the 118-acre South Central Waterfront District near downtown Austin. The process included extensive engagement with local property owners and policy makers and the development of three alternative build-out scenarios across several dozen parcels. The result was a framework plan that included a public-private partnership strategy using a set of local funding tools to fund infrastructure, public realm improvements, and affordable housing goals.
- **ULI Terwilliger Center Inclusionary Zoning Report—Washington, DC (2016).** Authored a report for the Urban Land Institute Terwilliger Center for Housing on “The economics of inclusionary development.” The report included a literature review and best practices, as well as modeling the impact of different inclusionary zoning program designs. Incentive offsets including density bonuses, tax abatements, parking reductions, and direct subsidies were modeled in different market typologies across the country.
- **Transit Value Capture in the Toronto Waterfront Corridor—Toronto, ON (2016).** Worked on a multidisciplinary team that considered the potential for real estate value creation and capture along a proposed eastern Toronto transit corridor focused on the Toronto waterfront revitalization area. An evaluative public finance model was deployed on MapCraft's map-based web application to test urban development scenarios, estimate their financial outcomes—particularly the transit project cost coverage of value capture—and communicate the results quickly and clearly. Multiple value capture strategies were evaluated, including tax increment financing, property assessments, and parking in-lieu fees.
- **Airbnb Portland Housing Affordability—Portland, OR (2016).** In a first of a kind study, received detailed property level data from Airbnb to be used in a publicly released study measuring the impacts of Airbnb rental units on housing affordability in the City of Portland.
- **Mixed-Use Zone Density Bonus—Portland, OR (2016).** Constructed a scalable prototype model to measure and calibrate a set of residential and commercial density bonuses as part of the Mixed-Use Zone revision for the City of Portland and the Portland Development Commission. The model measured the financial feasibility of an affordable residential unit set aside in exchange for additional density.
- **Portland Local Transportation Improvement Fee—Portland, OR (2016).** For the Portland Bureau of Transportation (PBOT), studied a funding mechanism to address hundreds of miles of unpaved or under-improved local streets. It will result in the implementation of a new Local Transportation Improvement Charge (LTIC) on new infill residential development on problem streets.
- **Veterans Memorial Coliseum Mixed Use Redevelopment Alternative—Portland, OR (2016).** Assisted a private developer with market analysis and financing alternatives for redevelopment of the VMC into a mixed-use site that retains a smaller sports venue and adds retail and creative office space elements.

- **Mercer Island Town Center—Mercer Island, WA (2016).** For the City of Mercer Island, evaluated how incentive zoning programs function, including development product types and construction costs, base and incentive zoning, public benefit valuation, incentive zone valuation, market dynamics, and implementation mechanisms. The analysis includes recommendations for revising the development code that could include changes to base and incentive height/FAR, mandatory vs. elective incentive provision, and structure and pricing of incentives and public benefits.
- **Downtown Burlington Mall Redevelopment—Burlington, VT (2016).** Assist the City of Burlington in crafting a redevelopment program for an existing downtown mall into a mixed-use site (office, multifamily, student housing, and retail). Analyzed the financial feasibility and assisted in crafting the development agreement with a selected developer.
- **Maryland Parkway Land Use and Implementation Plan for Proposed Light Rail Line—Las Vegas, NV (2016).** Worked on a multidisciplinary team on an environmental impact assessment of a proposed high-capacity transit investment on the Maryland Parkway Corridor in Las Vegas. Conducted a buildable land supply analysis to determine the existing supply of potential opportunity sites at key nodes along the corridor. In addition, provided analysis related to demand for new uses on the corridor if a transit investment were to occur and identifying local match funding options to help fund the potential transit investment.
- **PHC Housing Affordability Tool—Portland, OR (2016).** For the Portland Housing Center, developed an interactive, web-based housing tool to assess and spread awareness of housing affordability issues in the Portland UGB from 2000 to 2015.
- **Bellevue Affordable Housing Strategy—Bellevue, WA (2016).** Conducted an analysis evaluating the density and affordable housing incentive program for the City of Bellevue.
- **Sundoon Market Study—Dallesport, WA (2016).** Performed a market study for master planned golf course community in Klickitat County, Washington.
- **2015 Streetcar Corridor Update—Portland, OR (2016).** Updated RMV and affordable housing units in the streetcar corridor using 2015 data.
- **Corvallis Residual Land Calculation—Corvallis, OR (2016).** Calculated the residual land value for a potential property purchase for a lot in Corvallis for private developer.
- **Downtown Boise Housing Study—Boise, ID (2015).** For the Capital City Development Corporation, conducted a housing study to better understand opportunities and barriers to high-density housing in Downtown Boise.
- **Impacts of Affordable Housing in Seattle—Seattle, WA (2015).** Completed a policy brief for the City of Seattle on behalf of the Coalition for Housing Solutions that outlined a preliminary list of housing strategies for inclusion into the HALA process. The policy brief provides actionable solutions that have the potential to produce the needed units over the next ten years. The brief lays out potential changes to zoning, housing flexibility, permitting and entitlement measures, and proposes limited financial incentives for market rate housing that could increase the number of market rate units above historical construction amounts.

- **Portland Streetcar Economic Development Analysis—Portland, OR (2015).** Measured the price effects of the streetcar corridor and its contribution to real estate development by building a hedonic price model using a historical dataset of real estate transactions. Through the use regional time series real estate datasets, isolated the contribution of the streetcar corridor from other factors influencing real estate prices. The analysis resulted in estimates of the geographic reach (spatial impact) of the streetcar corridor’s contribution to land values. Estimates were then employed in a parcel-based model of the development process to construct a counterfactual scenario (without the streetcar) in order to estimate its impacts on the built environment.
- **Gresham Neighborhood Change Analysis—Gresham, OR (2015).** Modeled the impacts of a proposed Bus Rapid Transit expansion for the City of Gresham. The report investigated the impact of adding BRT to the probability of increased displacement through neighborhood change. Using formal modeling and time series data, estimated the price impacts on residential units related to their proximity to transit corridors.
- **Lincoln High Site Development Feasibility—Portland, OR (2015).** Created a set of alternative development scenarios for Portland Public Schools to understand the viability of potential development, in anticipation of the master planning and subsequent construction of a new Lincoln High School. Explored capital partnerships that could benefit the school district and its higher education partners, as well as potential income streams from a ground lease for new high-rise, mixed-use development on the site.
- **Analysis of Portland Cab Market for New Entrant—Portland, OR (2015).** Conducted a market study of the Portland Taxi Market, which demonstrated the need for additional taxis. The report was successfully used as part of Eco Cab’s application for a license to operate with the Private For Hire Transportation Board.
- **Benefit-Cost Analyses for TIGER Grant Applications—Lane County & Philomath, OR (2014).** Conducted a benefit-cost analysis for TIGER grant applications for a City of Philomath roadway improvement project, and the proposed Territorial Highway improvement for Lane County.
- **San Antonio RenewSA—San Antonio, TX (2014).** For the City of San Antonio, analyzed commercial development at the census block group level for the entire city. Categorized each block group with a market trajectory, projected rental rate and vacancy rate for multifamily, office, and retail product types.
- **Economic Contributions of Pavilion Project—Portland, OR (2014).** Forecasted the projected program revenue increases for the Portland Art Museum for a proposed transformational renovation and expansion project.
- **Development Feasibility of Brownfields in Oregon—OR (2014).** Modeled the financial feasibility for redevelopment of all brownfield parcels in the State of Oregon. The model determined the feasibility gap for commercial, industrial, and residential parcels throughout the state after the cost of remediation.
- **Airport Closure Business Impacts—Kennewick, WA (2013).** For the Port of Kennewick, modeled the transportation impacts for local businesses due to the closure of Vista Field Airport.

- **Creekside Master Plan—Beaverton, OR (2013).** Conducted a benefit-cost analysis for the Canyon Boulevard TIGER grant proposal for the City of Beaverton. Calculated the construction, operations, and maintenance costs, along with value of time, vehicle operating, safety, emission, and stormwater benefits.
- **Life Cycle Analysis of Intersections—Portland, OR (2013).** Created a standardized cost-benefit analysis tool for the National Cooperative Highway Research Program (NCHRP) for estimating the life cycle cost of intersection design.
- **Rembold Beaverton Market Study—Beaverton, OR (2013).** Produced a market study for a proposed multifamily project in Beaverton, Oregon. The report recommended unit amenities, target tenant market, unit composition and size, and predicted market rents based off of the creation of model of over 170 local properties.
- **National College of Natural Medicine Student Housing Study—Portland, OR (2013).** Conducted a student housing feasibility study for the National College of Natural Medicine in Portland. The study employed a stated preference survey to calculate student willingness to pay for difference housing products and amenities, as well as creating a financial pro forma to determine the feasibility of various development scenarios.
- **Spatial Construction of Targeted Employment Areas—Beaverton & Milwaukie, OR (2013–2014).** For the Cities of Beaverton and Milwaukie, spatially constructed new Targeted Employment Areas that were approved by Business Oregon for EB-5 investments.
- **OHCS Affordable Housing Analysis—Eugene & Cottage Grove, OR (2013).** Completed a market feasibility and demographic analysis in Eugene and Cottage Grove for an Oregon Housing and Community Services Low Income Tax Credit grant application for a private client.
- **Hillsboro Downtown Cost Competitiveness—Hillsboro, OR (2013).** Conducted a cost competitiveness study for the City of Hillsboro in order to access how city fees and regulations impact the feasibility of various types of proposed development projects.
- **Enhanced Market Analysis for Multi-Family Housing—Portland, OR (2013).** Constructed a model analyzing the market trends for the multifamily apartment market in Portland, Oregon. Using spatial modeling techniques, the model analyzed rental and vacancy rates, as well as investment opportunities.
- **Financing Options for Bend Hotel Project—Bend, OR (2013).** Created a pro-forma financial analysis for a hotel project in Bend, including modeling EB5, private equity, pension fund, and lender financing, as well as several exit scenarios incorporating take-out financing or forecasting future sales values.
- **Lane County Redevelopment Advising—Lane County, OR (2012).** Modeled the financial impact of different ground lease terms and structures for a Lane County commercial property in order to determine possible disposition or future uses.
- **Southern Nevada Strong Regional Plan—Las Vegas, NV (2012).** Conducted a study to forecast the housing needs for the Southern Nevada Regional Planning Consortium (SNRPC). Modeling included forecasting the demand for housing based on employment, migration, and demographic changes in Clark County, Nevada.

Regional Economics and Business Analytics

- **Report on Post-Recession Rebuilding—Portland, OR (2021).** ECONorthwest provided Prosper Portland with an economic analysis and report on recession recovery, "Rebuilding Portland: The Role for Economic Development." The report explores the economic effects of the pandemic, with a focus on business and labor perspective, strategy for traded sector, and comparisons to other cities/regions. ECONorthwest presented to the Economic Recovery Task Force, including the Mayor and the Portland City Council.
- **Portland Business Alliance International Trade Study—Portland, OR (2019).** Directed study quantifying the importance of international trade in throughout Oregon and the Portland Metro.
- **Impacts of Nike's Oregon Operations—Portland, OR (2019–Ongoing).** Calculated the economic impacts of the company's corporate headquarters, manufacturing operations, retail outlets, and philanthropic giving throughout Oregon and the Portland Metro region.
- **PBA Economic Check-up—Portland, OR (2013–2018).** Worked with the Portland Business Alliance to create the "Value of Jobs Update" from 2013 to 2018 detailing economic indicators of the Portland market relative to national and peer group cities.
- **Economic Impact of Etsy—Nationwide (2018).** In a first of its kind study, used survey data from a representative sample of sellers across the county to calculate the gross economic contributions of creative small entrepreneurs using the Etsy platform. Partnered with mySidewalk to deliver an online dashboard delivering the results from the study.
- **EIA Peer Review for Business Oregon—Oregon (2018).** Business Oregon recently performed an economic impact analysis of a biofuels facility. ECONorthwest performed a third-party peer review to ensure the underlying assumptions used for the analysis align with best practices.
- **Economic Impacts of Waste Management—Portland, OR (2018).** Estimated the impacts from hauling, disposal, recycling, regional dispatch, and energy production for Waste Management in the Portland Metro Area and Oregon as a whole.
- **Value of Portland Trail Blazers—Portland, OR (2018).** Performed a contingent valuation model based on a survey in the Portland Metro area to estimate economic benefits (i.e. consumer surplus) and improved quality of life generated from having a local sports franchise. Also calculated the economic impacts from visitor spending from people who travel to the region for games.
- **Economic Contributions of Intel in Oregon—Statewide (2018).** Updated of IMPLAN analysis of Intel's capital, operation, and charitable expenditures in Oregon during 2016.
- **TriMet Orange Line Economic Impacts—Portland, OR (2017).** Calculated the economic impact associated with the construction of the Orange MAX (light rail) line, including the fiscal benefits to state and local governments.
- **Zidell Yards Economic and Fiscal Impacts—Portland, OR (2017).** Calculated the gross economic and fiscal contributions from the construction and stabilized operations of Zidell Yards for the City of Portland and the 7 county MSA.

- **PBA Job Automation Study—Portland, OR (2017).** Worked with PBA to study the risk of automation and computerization for the future of work in Oregon.
- **Portland Business Alliance Job Automation Study—Portland, OR (2017).** Worked with the PBA to study the risk of automation and computerization for the future of work in Oregon.
- **Economic Impact of Comcast NBCUniversal—Statewide (2017).** Analyzed the gross economic contributions of Comcast NBC/Universal in the state of Oregon.
- **Economic Contributions of Cambia—OR, WA, ID, UT (2017).** Estimated the economic contributions of Cambia operations in the four-state western region for the most recent fiscal year.
- **Economic Analysis of Corrections Enterprises—Salem, OR (2017).** Calculated the impact of products and services performed by inmates in the Oregon Corrections Enterprises agency and looked at the potential “crowding out” effects of OCE operations on Oregon’s economy. Additionally, considered the impacts of inmate training on post-release outcomes (e.g., labor force participation and wages).
- **Microsoft Data Center Economic Impact Analysis—Seattle, WA (2016).** ECONorthwest estimated the economic and fiscal impacts associated with the construction and operation of an existing data center following a proposed expansion. Created a report designed to educate government and economic development agencies about tax legislation relevant to data center development in order to inform policies related to data center development. Produced an analysis of key data center siting factors as well as a total cost of ownership assessment.
- **Health Care Innovation in Washington State—Seattle, WA (2015).** The Cambia Grove, WBBA, and The Washington State Department of Commerce commissioned and collaborated with ECONorthwest measure the economic contribution of the healthcare innovation sector in Washington State. This analysis was commissioned as a foundation for measuring the sector and to begin a discussion about how cross-sector collaboration can help grow healthcare innovation across the state of Washington.
- **Economic Impacts of Oregon Tech—Klamath Falls, WA (2015).** Evaluated the economic contributions Oregon Tech with a focus on its two campus locations in Klamath Falls and Wilsonville, OR. This included measuring the economic effects operational and capital expenditures, along with the effect of student spending.
- **Hillsboro Data Center Economic Contribution—Hillsboro, OR (2016).** Measured the economic and fiscal contribution of data centers to the Hillsboro economy, including supply chain relationships, local taxes, and franchise fees.
- **Airbnb Portland Economic Impact Study—Portland, OR (2016).** Conducted an economic contribution study for Airbnb’s City of Portland gross footprint using data provided from a survey of their hosts and guests.
- **Oregon SBDC Network IMPLAN Analysis—Eugene, OR (2015).** Calculated the net economic impacts generated by 12 individual businesses that received assistance from the Oregon Small Business Development Center Network.

- **Uber National Economic Impact Study—Various U.S. Markets (2014).** Created an economic impact study for Uber measuring the gross and net impacts in 11 U.S. cities of operation, including modeling the size of the taxi market and the consumer surplus generated by Uber operations in each of the cities. Forecasted the growth of Uber’s impacts nationally and in multiple US and foreign markets.
- **Portland Job Polarization—Portland, OR (2014).** Produced a study for the Portland Business Alliance looking at the middle wage jobs throughout the Portland Metro. Compared middle wage job growth to peer and aspiration regions over time.
- **Historic Flight Foundation Economic Impact Study—Snohomish County, WA (2014).** Conducted an economic and fiscal impact study for the creation of a proposed historic aviation campus at Paine Field in Snohomish County, Washington. Calculated the net fiscal impacts that the County would generate compared to an alternative development scenario.
- **Mary’s Woods Economic Impact Study—Lake Oswego, OR (2014).** Conducted an economic impact analysis for Mary’s Woods at Marylhurst to determine the economic footprint created through the construction of new facilities, the operation of the facility, and spending in the local economy by residents.
- **Intel Economic Impacts—Hillsboro, OR (2013).** Conducted an economic impact study for Intel, calculating the gross economic impacts for the 2012 Oregon operations (employment, capital spending, and charitable contributions), including calculating the direct and indirect fiscal impacts generated for state income and property taxes.
- **Overview of Oregon’s Manufacturing Sector—OR (2013).** Created a report and presentation investigating the economic performance of the manufacturing industry in Oregon for Associated Oregon Industries.
- **OHSU 2012 Economic Impacts and the Knight Cancer Center—Portland, OR (2013).** Conducted an economic impact study for OHSU calculating the gross and net economic and fiscal impacts for its 2012 statewide operations. In addition, the economic and fiscal impacts for the proposed Knight Cancer Center were forecast based upon financial projections for construction and operations.
- **GPI Business Relocation Impacts—Portland, OR (2013).** Modeled for Greater Portland Inc. the net economic impact of a company relocating from Portland, Oregon to Clark County, Washington compared to the company relocating outside the region.
- **Gas Station Feasibility Study—OR (2013).** Created a market feasibility study for the construction of a gas station and convenience store for an Oregon Indian tribe.
- **Market Feasibility Study—OR (2013).** Conducted a market feasibility study of the modular and pre-fabricated home market for a private client.
- **Facebook Fiscal and Economic Impacts—Prineville, OR (2013).** Conducted an economic and fiscal impact study for Facebook, measuring the associated impacts from the construction and operation of their Prineville Data Center.

Banking and Finance

- **Idaho Credit Union Economic Impacts—Statewide (2018).** Conducted an economic contribution study for the Northwest Credit Union Association measuring the impact of all credit union operations in the state.
- **Northwest Credit Union Association Economic Impact Study—OR & WA (2014 & 2016, 2018).** Performed an economic impacts study for the Northwest Credit Union Association measuring the impacts of all credit unions in Oregon and Washington. Data sources included surveys of member institutions to capture the impacts of member savings, total economic output, the number of jobs, and total income related to credit union operations in the Northwest. The study was first conducted in 2014, then updated in 2016 and 2018 to establish baseline industry growth.
- **CNCUL Economic Contribution Study—Ontario, CA (2016).** Conducted an economic contribution study measuring the jobs, income, and economic output for all members of the California and Nevada Credit Union League.
- **NWCUA Policy Analysis—Portland, OR (2015).** For the Northwest Credit Union Association, analyzed the economic and fiscal impact of a policy change that would tax credit unions at the state level using the REMI Policy Insight model.
- **Oregon Cannabis Legalization Analysis—OR (2014).** Estimated the fiscal revenue associated with the proposed ballot measure to legalize marijuana for the State of Oregon. Estimated the future demand to calculate the revenue for the first complete fiscal year after legalization.
- **Pension Obligation Bond Analysis—Various, OR (2013).** Used Monte Carlo analysis to evaluate the present value as well as the value at risk associated with the use of side accounts to issue Pension Obligation Bonds for various public entities in the State of Oregon.
- **Credit Union Policy—Portland, OR (2013–2014).** Conducted a study examining the market growth, concentration, and the impact of not-for-profit tax exemptions of Commercial Banks compared to Credit Unions at the National, State, and County Level for the Northwest Credit Union Association.

Expert Testimony and Litigation Support

- Provided expert testimony to calculate the damages associated with a terminated lease and relocation expenses related to the failed negotiation of a commercial lease extension. *Portland, OR*
- Contributed to a hedonic study to value a parcel of raw land for a private party in a property condemnation case. *Washington County, OR.*
- Created a model to value the present value of a Life Estate for a private party dispute involving multiple parcels of land. *Umatilla County, OR.*
- Provided expert testimony and calculated the economic damages associated with a personal injury case. *Salem, OR.*
- Provided expert testimony and calculated the economic damages associated with the breaking of a lease on a commercial retail property. *Eugene, OR.*

- Provided expert testimony and calculated economic damages related to the breaking of a commercial lease, including demographic and parking analysis. *Beaverton, OR.*
- Provided expert testimony and calculated the economic damages associated with a dispute related to the fair market valuation of a lease renewal for an industrial property. *Portland, OR.*
- Provided expert testimony and calculated economic damages associated with an adverse possession claim on a residential real estate transaction. *Portland, OR*
- Wrote report and provided expert testimony for a private client quantifying the business interruption damages from a proposed county/city public works road improvement projects. *West Linn, OR.*

INVITED PRESENTATIONS AND SPEAKING ENGAGEMENTS

- “Dissecting TOD Supply, Affordability, and Displacement” American Planning Association, National Conference, San Francisco, CA, 2019
- “Missing Middle Housing in Oregon” Oregon House Committee on Human Services and Housing” Salem, OR, 2019
- “Calculating national housing underproduction: Policy options and affordability implications” National Multifamily Housing Council Research Forum, Denver, CO, 2019
- “2019 Construction Industry Outlook” Daily Journal of Commerce Builder Breakfast, Portland, OR, 2018
- “Regional Economic Outlook” Portland Business Alliance Leadership Retreat, Skamania, WA, 2018
- “ADUs and the Missing Middle: Building Housing Supply in a National Context” PSU Urban Sustainability Accelerator, Portland, OR, 2018
- “An Integrated Land-Use and Economic Impact Approach to Modeling Housing Policy” REMI User’s Conference, San Diego, CA, 2018
- “Development Economics and Housing Affordability” The Columbia Gorge Commission, Portland, OR, 2018
- “Economic Impacts from Housing Production Policies, and Implications for Leveraging Public Transportation Investments” International Transportation and Economic Development Conference, Washington, D.C, 2018
- “Housing Underproduction in California: Addressing the Affordability Challenge” San Francisco, CA, 2018
- “Portland Metro Region Economic Landscape: Opportunities and Challenges” Greater Portland Inc. Board Retreat, Portland, OR, 2018
- “Portland Economic Check-up” Columbia Corridor Association, Portland, OR, 2018
- “Housing Underproduction in Washington State” Washington State House of Representatives CDHTC, Olympia, WA, 2018

- “Yes in my back yard. Building more Housing Units in Urban, Suburban, and Rural Oregon” Oregon Leadership Summit, 2017
- “Inclusionary Housing: Lessons from American Cities” Mississauga Housing Forum, Canadian Urban Institute, 2017
- “The Economic Impact of Housing Production Policies, and Housing Affordability Implications” REMI User’s Conference, Charleston, SC, 2017
- “National Economic Trends and Credit Union Industry Implications” Alaska Credit Union League Annual Meeting, Sitka, Alaska, 2017.
- “Housing Availability and Affordability,” Oregon Leadership Summit, Portland, 2016.
- “State of the Economy” America’s Credit Union Conference, CUNA, Seattle, WA 2016
- “The State of Housing in Oregon,” Neighborhood Partnerships Housing Summit, 2016.
- Urban Land Institute Toronto, Roundtable on Inclusionary Zoning, and presentation on “The Economics of Inclusionary Development.” Toronto, Canada, 2016.
- Provided testimony on housing affordability in Oregon to the House Committee on Human Services and Housing, 2016.
- “The Economics of Inclusionary Development,” Urban Land Institute Northwest, Portland, OR, 2016.
- “The Effects of Transit on Urban Development.” American Planning Association, National Conference, Phoenix, AZ, 2016.
- “The Economics of Inclusionary Development” Housing Opportunity Conference, Terwilliger Center for Housing ULI, Boston, MA, 2016
- “Measuring the Impact of Transportation Investment” Oregon American Planning Association, Portland, OR, 2015.
- American Planning Association, National Conference, “Economic Development and the Value of Placemaking.” Seattle, WA, 2015.
- “Will the Bubble Burst: Planning Ahead for Portland in 2020” Society for Marketing Professional Services, Portland, 2015.
- “2015 Economic Outlook: Implication for the Credit Unions Industry,” Northwest Credit Union Association, Amplify Annual Meeting, 2015.
- “2014 Economic Impact of Credit Unions in the Northwest,” Northwest Credit Union Association, Amplify Annual Meeting, Spokane, WA, 2014.
- “Real Estate Market Forecast,” Douglas County, OR 2015 Economic Forecast, 2014.
- Leading Age Oregon, Fall Leadership Conference, “Oregon Economic Trends and Implications for Aging Services,” 2014.
- Portland State University Economic Seminar Series, “Calculating the Fiscal Impact of Marijuana Legalization in Oregon,” 2014.
- Pacific Northwest Regional Economic Conference, Real Estate Market Overview, Finance Panel, 2014.

- Northwest Credit Union Association Executive Summit, “The Myth of the Uneven Playing Field,” 2013.
- “Mortgage Default in Southern California: Examining Distressed Borrower’s Decision Making,” Western Political Science Association, 2012.
- “Strategic Default—A Formal Model of Decision making in the Great Housing Recession,” Midwest Economics Association, 2011.