

TECHNICAL SPECIALTIES

Mr. Stifter is an economist and consultant based in the San Francisco Bay Area and has 13 years of professional experience. He specializes in applied microeconomic analysis and has conducted and led a wide variety of economic, econometric, and financial studies relating to complex legal issues, regulation, and strategic business decisions that involve measurement of economic impacts and damages, natural resource services valuation, human health risk, climate change, environmental regulation, environmental risk in business transactions, antitrust and competition, and financial services provision, among others.

Mr. Stifter regularly supports attorneys with all phases of legal and regulatory matters in a variety of roles, including testifying expert. Recently, Ryan has supported clients with ecological and recreation service valuations, quantification of environmental risk in business transactions, evaluating the economic costs and benefits of air quality standards and carbon reduction legislation, evaluating the economic impacts of invasive species management, and financial impacts of renewable energy asset retirement on third-party stakeholders.

EXPERIENCE SUMMARY

Thirteen years of experience in agriculture and food processing, real estate, oil and gas, power, mining, tourism, recreation, financial services, and manufacturing sectors.

CREDENTIALS

- M.S. Agricultural & Resource Economics, University of California, Davis, CA, USA, 2004
- B.S. Managerial Economics, University of California, Davis, CA, USA, 2003
- Minor Environmental Policy Analysis, University of California at Davis, USA, 2003

PROFESSIONAL AFFILIATIONS AND REGISTRATIONS

- Agricultural and Applied Economics Association
- Association of Environmental and Resource Economists

EXPERT TESTIMONY

- Adams et al. v. California Department of Fish and Wildlife*, California Superior Court, 2018. (Deposition, Trial).
- City of Portola v. California Department of Fish and Wildlife*, California Superior Court, 2015. (Deposition, Trial).

EXAMPLE PROJECTS

Key Projects

- Impact of Invasive Species Management on Property Values and Commercial Enterprise* – Conducted an investigation into whether a project implemented to eradicate an aquatic invasive species from a nearby trophy trout fishery and water supply reservoir reduced the value of vacant parcels, single-family homes, commercial properties and business income

in the surrounding rural area. Presented findings and opinions during trial testimony, including about research findings offered by the opposing party's economic expert, which contributed to \$20 million in savings for the client.

- Impact of Invasive Species Management on Local Tax Revenue* – Conducted an investigation into whether a project implemented to eradicate an aquatic invasive species from a nearby trophy trout fishery and water supply reservoir reduced the property tax revenue of a nearby city and presented findings and opinions during trial testimony, including about research findings offered by the opposing party's economic expert, which contributed to over \$80 million in savings for the client.
- Ecological and Recreation Services Restoration Decision Model* – Developing a Monte Carlo model to inform decisions about the composition and scale of ecological and recreation improvement projects designed to compensate for service losses from a marine oil spill. The model allows the client to incorporate uncertainty about the outcome of several variables determining service losses and gains, which it has used for communicating with Trustee scientists and legal counsel.
- Recreation Services Valuation* – Conducted and supervised econometric modeling to quantify recreation service losses resulting from a marine oil spill with a multi-year injury period affecting multiple states and estimated the value of recreation services gained from portfolios of improvement and enhancement projects proposed by the Trustees, which led to over \$200 million in savings for the client in the final NRD claims settlement. Responsible for data management, validation and analytics functions supporting multiple consulting teams.
- Evaluation of Human Health Risk Exposure Metrics for Remediation Decisions* – Contributing to statistical analysis evaluating the adequacy of survey data used to develop fish consumption exposure metrics as part of an ongoing human health risk assessment at a Superfund Site that will ultimately inform the selection of remediation alternatives.
- Environmental Liability Risk in Petroleum Options Contracts* – Developed a proprietary model of the financial liability comprised of cleanup costs, natural resource damages claims and private claims for injuries resulting from various potential accidents at oil refineries and related facilities. The client is actively using the model to evaluate financial and reputational risk of commercial activities.
- Model of Environmental Liability Risk in Chemical Manufacturing Joint Venture* – Developed model of natural resource and property damages liability from worst-case toxic releases and explosions at a chemical manufacturing facility forming the basis for negotiating insurance coverage and pricing for the joint venture.

- *Impact of Fish Consumption Advisories on Recreation Use* – Contributed to econometric modeling to quantify recreation service losses at lake subject to fish consumption advisories, and contributed to developing estimates of service gains from a suite of improvement and enhancement projects designed to compensate the lost services. The parties reached a settlement agreement during 2017.
- *Environmental Impact of Proposed Carbon Regulation* – Developed a microeconomic model quantifying the market transfer of domestically produced steel to producers outside of the regulated area if the domestic industry faces compliance costs associated with a proposed facility-level greenhouse gas (GHG) emissions limit, and the incremental change in global GHG emissions from the steel industry. Legal counsel for the industry has cited the study findings as evidence that the regulation would result in significant adverse environmental impacts.
- *Economic Costs and Benefits of Clarifying the Definition of WOTUS in the Clean Water Act* – Developed research demonstrating issues with EPA’s and USACE’s assumptions and data and audited microeconomic concepts underlying their model quantifying the economic costs and benefits associated with clarifying the language defining the term “Waters of the United States” as it is used in the Clean Water Act. Contributed to a whitepaper of the findings submitted to the administrative record on behalf of regulated mining company.
- *Asset Retirement Risk in the Photovoltaic Solar Power Industry* – Developed probabilistic model of photovoltaic solar power plant net decommissioning costs for a confidential client’s use in evaluate asset retirement scenarios and communicating financial assurance obligations to potentially affected third parties and financial institutions.
- *Economic Costs and Benefits of Methane Waste Controls* – Supported an industry group assess the cost to industry and societal benefits of a proposed rule requiring methane emission controls for all existing emissions sources in the upstream oil and gas market segment. Developed a Monte Carlo model that quantified the effect of uncertainty in the data and assumptions on the cost-benefit ratios developed by the USEPA and contributed to a whitepaper submitted to the administrative record.
- *Economic Costs and Benefits of Gas Venting and Flaring Limits* – Supported an industry group assess the cost to industry of proposed and final rules limiting the volume of natural gas flared and vented from new oil wells on BLM-administered leases. Conducted statistical analysis and research to assess the validity USEPA’s model assumptions and developed alternative cost estimates associated with oil production deferred to meet flaring limits. Developed a statistical model from millions of well reports that predicted the incremental oil wells idled in response to cost impacts of the rule. Contributed to a whitepaper submitted to the administrative record and technical documentation supporting meetings with Congress.
- *Economic Impact of VOC Emissions Controls on Oil Production Industry* – Supported an industry group assess the potential oil production impacts from engineering controls to limit volatile organic compound (VOC) emissions from existing oil and gas wells within a USEPA non-attainment area in Colorado. Analyzed well production reports comprising millions of data points to predict well abandonment and estimate incremental idling in response to regulatory costs. Contributed to written rebuttal testimony that was submitted as part of the rulemaking that served as the basis for testimony at the subsequent hearing.
- *Analysis of Superfund Site Remediation Funding* – Supported financial analysis determining the appropriate amount of the initial payment into a long-term remediation fund established for a Superfund Site in New Jersey in rebuttal to the Trustee’s financial model. Federal Court determined the Trustee’s expert’s model met the reasonableness standard.
- *Ecological Damages from PCB Exposure* – Contributed to the testifying expert’s critique of the Trustee’s habitat equivalency analysis (HEA) model for quantifying ecological damages associated with PCB contamination at a Superfund Site in New Jersey. Federal Court upheld the Trustee’s assessment as meeting the reasonableness standard. The matter is still pending in State Court.
- *Valuation of Walnut Orchard Crop Loss Claim* – Evaluated the \$82 million claim for replacement cost and interim lost profits from exposure to gavicide® oil for an attorney representing the primary insurer. Developed alternative yield curves and future commodity price assumptions that resulted in damages amounting to 10 percent of the initial claim. The testifying expert relied on the model results and findings during deposition testimony.
- *Valuation of Almond Orchard Crop Loss Claims* – Evaluated separate claims ranging from \$1 to \$25 million arising from indirect or direct exposure to pesticides, herbicides and fertilizer for attorney clients representing the primary and excess insurers. Developed forecasts of interim lost profit using appropriate yield curves but-for exposure, and commodity price curves developed from econometric models of almond price formation. Two of the matters settled for less than the initial claim, and the jury awarded minimal damages in the other.
- *Valuation of Processing Tomato Operation Crop Loss Claim* – Evaluated insurance claim for lost profits from reduced tonnage of marketable processing tomatoes at an operation indirectly exposed to pesticide. Developed a Monte Carlo simulation to determine the probability that the tonnage claimed but-for the

alleged pesticide damage would have been realized and calibrated the results using yields at nearby unaffected fields. The testifying expert relied on the model results at trial, where the jury did not find liability for the alleged injury.

- *Valuation of Pistachio Orchard Crop Loss Claim* – Evaluated a \$0.5 million claim arising from stunting of yield and degraded product quality during a single harvest from exposure to glyphosate® for an attorney representing the primary insurer. Developed a statistical model that predicted expected yield after accounting for general conditions during the harvest and prepared statistical analysis of historical product quality and price premiums earned. The parties settled for \$0.35 million prior to trial.
- *Valuation of Contaminated Groundwater* – Supported the testifying expert develop a valuation of groundwater restoration costs in a matter involving contamination by produced water from a nearby oil and gas operation. Conducted research and implemented a replacement cost forming the basis of the expert’s opinion and evaluated the market value model offered by the opposing party’s economic expert.
- *Avoided Cost of Flooding in Agricultural Region* – Oversaw development of a model designed to value proposed flood mitigation measures along a river within a major high-value perennial crop area in California. The model was developed following the avoided cost valuation approach to quantify lost production value, income and jobs directly within the agricultural industry and indirectly within industries from which it purchases and supplies, as a result of varying degrees of flood inundation. Authored report of findings appended to the Final Environmental Impact Report for the project.
- *Economic Valuation of Water Supply Reservoir* – Developed model to quantify the value of irrigation water supply from a major water supply reservoir and hydroelectric dam in terms of the production value, labor income and jobs associated directly and indirectly with dairy and beef cattle production derived from irrigated feed crops within the region, as the baseline for assessing the economic impact of alternative in-stream flow requirements and other aspects of dam relicensing application under consideration by the FERC.
- *Unintended Environmental Consequences of Endangered Species Regulation* – Developed and implemented an econometric model of the global swordfish industry, including the supply equations from each region of the world to evaluate whether the National Marine Fisheries Service’s (NMFS) decision to close the Hawaiian longline pelagic fishery during 2001-2004 actually reduced endangered sea turtle by-catch. Empirical results showed that other, less regulated regions increased supply of swordfish to the global market to fill the void in market demand left by the

closure, thereby increasing global sea turtle by-catch. The findings were published in the journal Marine Policy.

- *Economic Costs of Critical Habitat Designation in Southern California* – Developed model to estimate direct and opportunity costs associated with proposed critical habitat designation areas under the Federal ESA that would be borne by private land owners in southern California.
- *Economic Costs of Aquatic Critical Habitat Designation* – Evaluated proposed critical habitat designated for salmon and steelhead species throughout California under the Federal ESA and developed demonstrative model of cost impacts on the rice industry. Prepared comment letter that the trade group client submitted to the administrative record.
- *Impact of Merger on Contract Wages* – Managed all aspects of supporting a Fortune 500 pork processing company respond to data and information requests made by the USDOJ and FTC associated with their investigation into a multi-million merger. Developed econometric analysis of plant utilization and contributed to development of grower supply schedules designed to investigate whether the merged entity could profitably suppress wages paid to hog producers. The merger was approved with minimal divestiture of downstream assets, unrelated to the primary concerns about grower wages.
- *Evidence and Impact of Discriminatory Lending Practices* – Conducted and managed a variety of economic, econometric, financial and statistical analysis using USDA loan making and loan servicing transaction databases, and third-party data, to develop evidence about alleged nationwide discriminatory lending practices toward certain established and prospect farmers and ranchers. Contributed to rebuttal analysis of the opposing expert’s “fair share” approach to common impact and class damages, and supported counsel at the expert’s deposition. The matter settled after a change in federal government administration.
- *Commodity Supply Contract Lost Profits Analysis* – Supported the expert witness develop opinions about the materiality of changes in the No. 14 sugar contract price that formed the basis of a supply contract and the measure of lost profits resulting from non-performance. Conducted statistical analysis of futures and spot prices, developed lost profits calculation and identified other sources of price discovery relevant to the contract clauses. An arbitration panel awarded our client \$6 million.
- *Impact of Brand Label on Joint Venture Profits* – Developed econometric model using proprietary transaction data to measure the fresh tomato market price premiums afforded to various products marketed by a vertically integrated firm party to a joint venture and assisted with constructing the factual and counter-factual joint venture distributions as a measure of damages from losing

the brand label after the partnership dissolved. Prepared rebuttal analysis and supported counsel with deposition and cross-examination at the arbitration.

- *Impact of Cartel Behavior on Grower Premiums for Fluid Milk* – Conducted and led empirical analysis of grower payments transaction data to assess variability in premium payments across cooperatives and grower organizations over time as evidence of cartel behavior and common impact. Ensured integrity of econometric model developed to quantify class damages as the premium underpayments by fluid milk bottlers. Managed reply to econometric analysis prepared by multiple rebuttal experts. The court certified the grower class.
- *Use of Trade Secrets* – Analyzed financial reports, testimony and employment data to determine a company’s capacity to manufacture additional vegetable harvesting machines it claimed were not sold as a result of other parties using its trade secrets. The testifying expert relied on the analysis during deposition testimony and the matter settled prior to trial.

- *Impact of Insurance Policy Bid-Rigging* – Conducted analysis of insurance brokerage contracts used by defendant brokers and insurers to implement premium steering through bid-rigging for the receipt of contingent commissions that included leading development and analysis of a database of contracts to demonstrate their common features over the class period, insurance lines and brokerages. Contributed to developing alternative class damages approaches formalized in a declaration to the court. Several insurers agreed to multi-million dollar settlements prior to ruling on class certification, which was ultimately not granted.