Title: Wall Street Or Pacific Stocks? An Analysis of the Historical Drivers of Sportfishing Demand

Authors: James Hilger, NOAA NMFS Southwest Fishery Science Center - La Jolla (USA)
        Eric Janofsky (USA)

Abstract: Recent aggregate models of recreational participation have largely focused on demand systems and choice models utilizing cross sectional data. While these strategies may be advantageous for the estimation of welfare measures, they have left unexplored the relationship between recreation participation and general temporal economic trends. This research shifts its focus to the impact that general economic trends have on recreation participation while controlling for endogenous factors that impact demand through changes in quality. This research develops a theoretical model of consumer participation for recreational fishing being conditionally dependent on economic and fishing characteristics, such as fish stock and climate. The model is applied to a unique time series of commercial recreational fishing effort within the Southern California tuna charter and party boat fleets between 1950 to 2008. The demand for fishing effort is estimated utilizing an auto-regressive framework incorporating both economic and fishery characteristics; the analysis includes the testing of structural breaks in demand for fishing effort while allowing for technological change within the fishery. Empirical results illustrate that changes in relative recreator effort within the fishery are driven by both economic and fishery characteristics. Results support the calculation of cross elasticity estimates of income and fishery characteristics on fishing effort. The research suggests that single period or panel data analyses may neglect to account for changes in demand for recreation due to macroeconomic, biological, and environmental conditions which can be captured through time series analysis. Failure to indentify these effects may lead to biased estimates.