

# Measuring the Impact of Air Quality on Housing Markets and Residential Choices in Southern California

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## Abstract

Over the past twenty years there have been dramatic improvements in air quality in Southern California. Unfortunately, we know very little about the economic gains to households that resulted from these improvements. This paper provides, for the first time, estimation of a locational general equilibrium model and a behaviorally consistent welfare analysis of non-marginal changes of local public good provision. We develop a general equilibrium model in which residential choices in a system of local jurisdictions are based on the mix of site specific public goods and local housing market conditions. We estimate the structural parameters of the underlying equilibrium model using a unique data set which we assembled from a number of different sources for the LA metropolitan area. We then compute equilibria in the local economy under a number of different policy scenarios and construct welfare measures which properly take the adjustments of households in equilibrium to non-marginal changes in air quality into consideration. Finally, we compare the findings of our approach to those based on hedonic regression models. Our findings suggest that neglecting general equilibrium effects can seriously bias the willingness to pay estimates for air pollution policies.