

Housing Market Capitalization of Freshwater Fisheries: Evidence from Lake Oneida, NY

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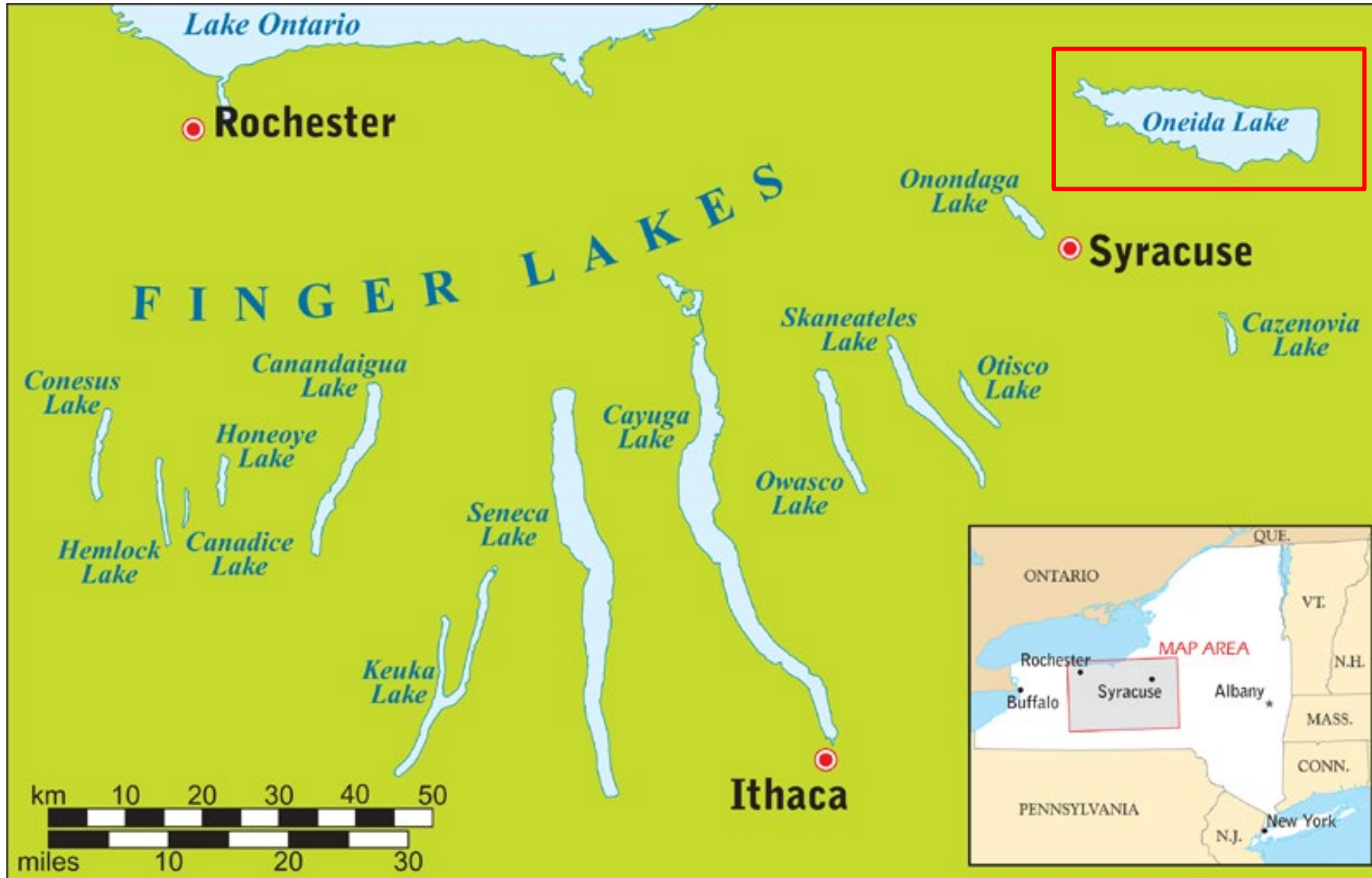
Motivation

- Human societies benefit in numerous ways from freshwater fisheries
 - Biodiversity
 - Ecosystem health
 - Recreational fishing
- Travel cost model is widely used to estimate the economic values of recreational fishing (e.g Phaneuf et al. 2000; Provencher and Bishop 2004; Melstrom and Lupi 2013)
- None study valued fish population changes via hedonic property value model

This Paper

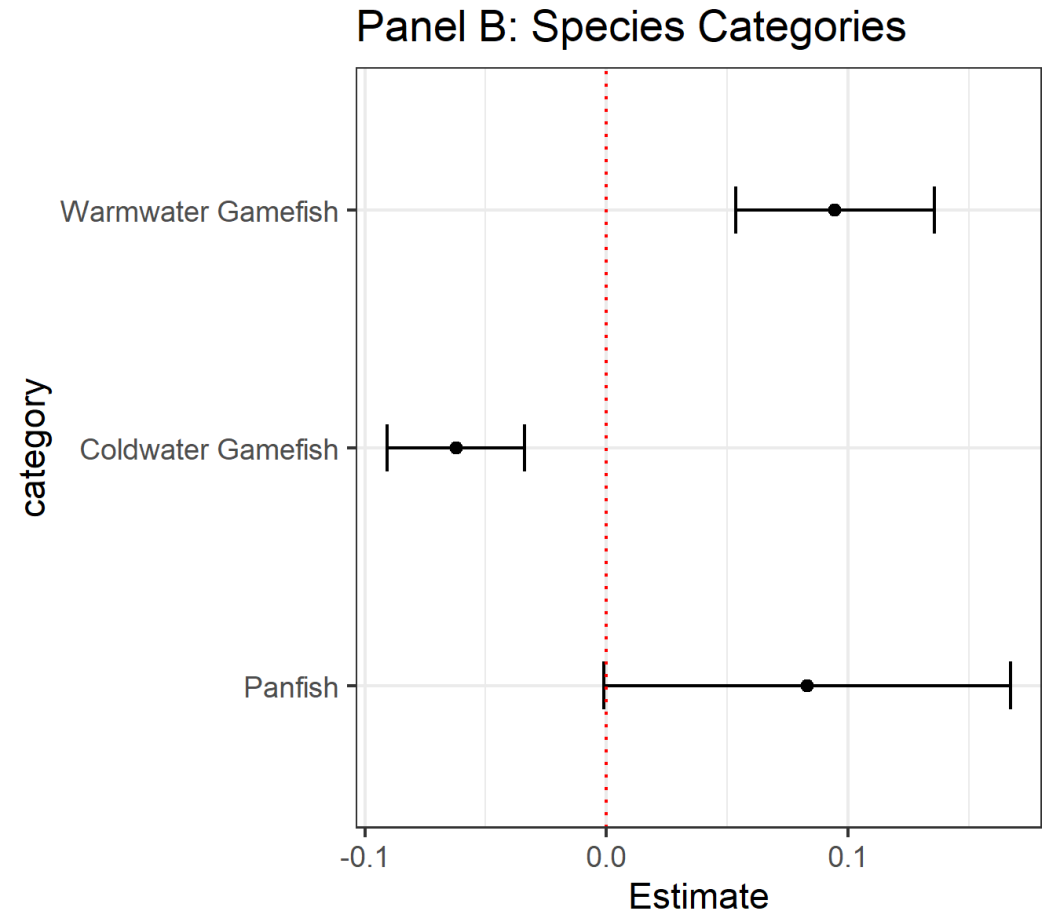
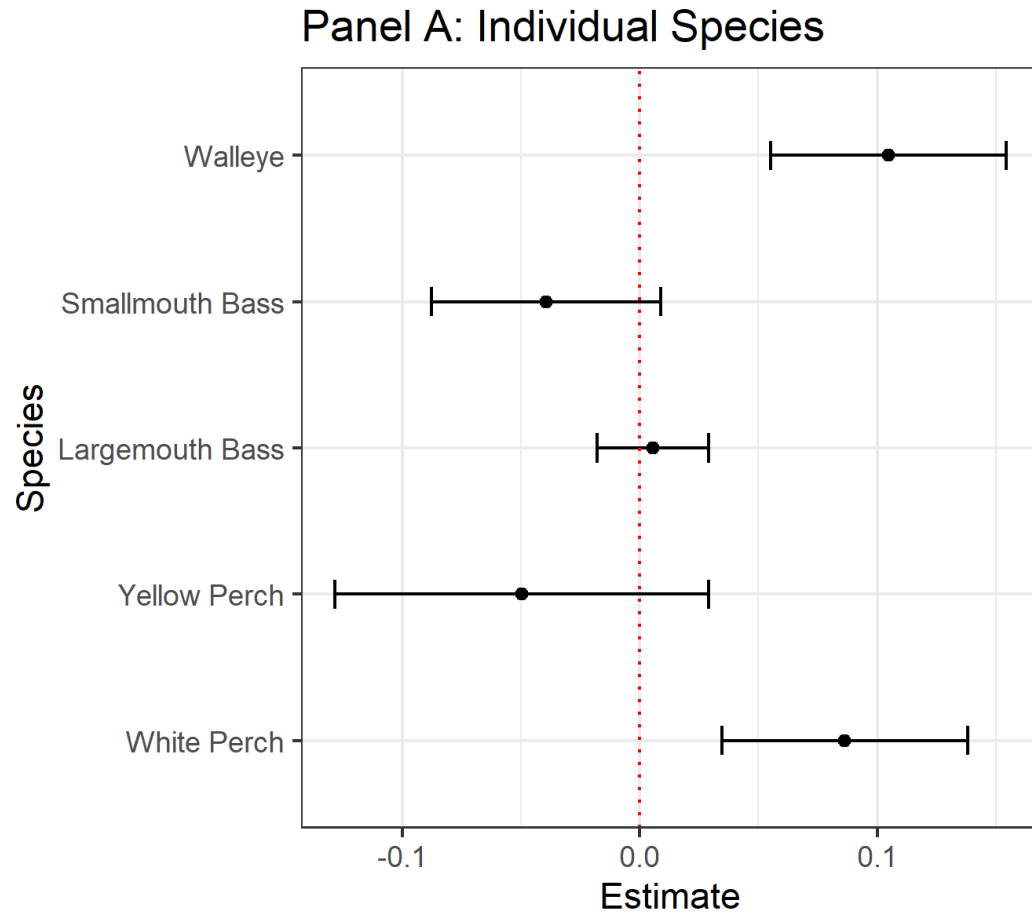
- Estimate capitalization value of changing fish population via hedonic property value model
- Advantage of hedonic property value model
 - Can quantify homeowners' revealed preference towards lake fishery
 - Complementary to the economic benefits estimated from visitors via the travel cost approach
 - Can identify the capitalization effect of changing resources conditions
 - Identify the influence of exogeneous fishing site changes
 - Can explore the impacts of fishing site changes & water quality changes
 - Can consider a more general value: amenity + recreational

Study Site: Oneida Lake, NY



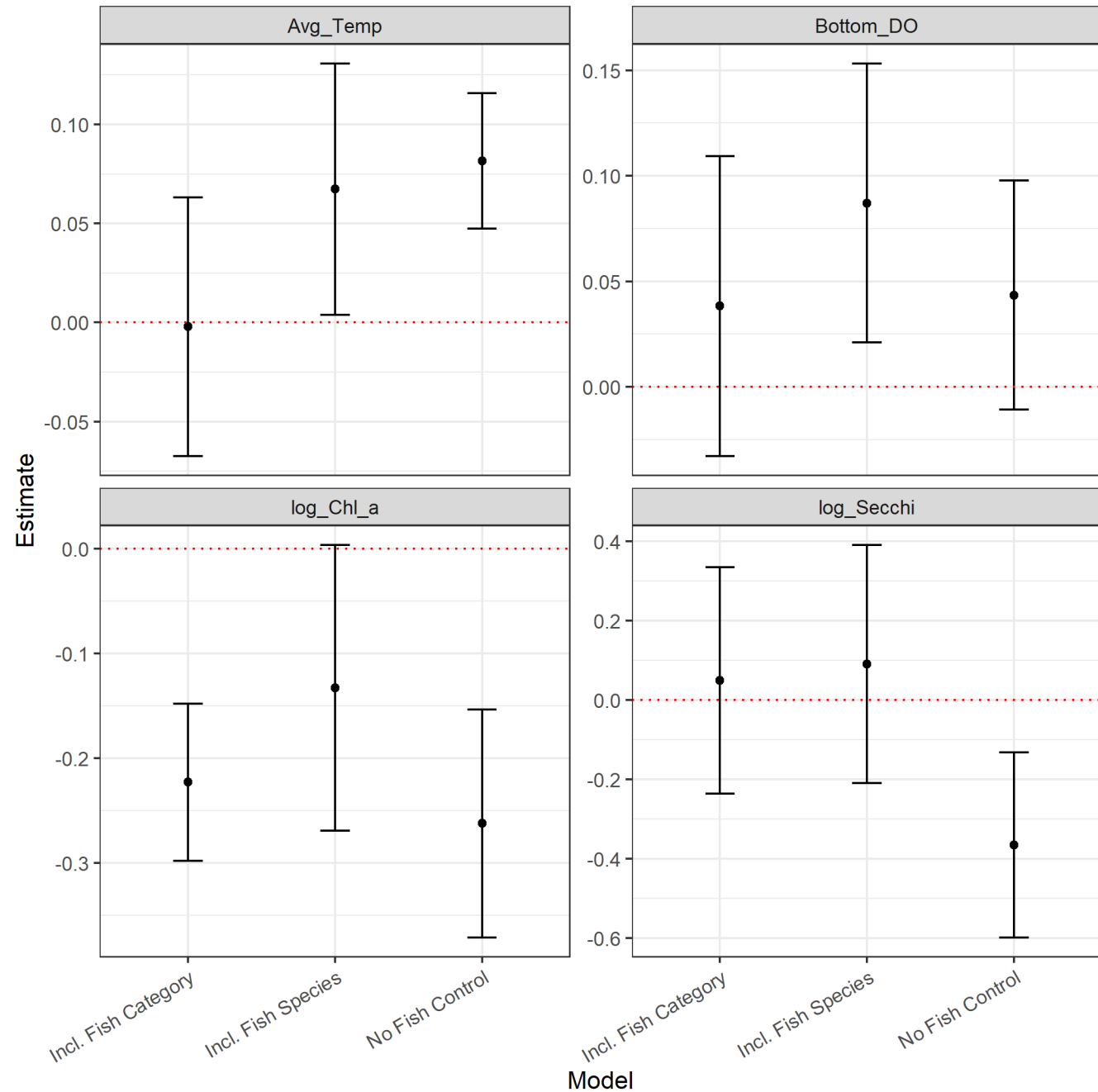
- A long history of recreational fishery activities
- Provides anglers more fish per acre than any other lake in the northeastern United States
- Walleye is the most sought after species

Estimation Results



Lakefront premium of Water Quality

- Multiple water quality indicators (Water Temperature, Bottom DO, and Chl-a) significantly capitalize into lakefront property prices
- Estimating a water-quality-only model leads to biased estimates
- In the case of Secchi, omitting fish abundance leads to a counter-intuitive effect





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