Overview

This is a neat paper

- Very few papers \test" the t obtained by structural demand models
- An important issue since
  - These models are widely used by researchers and policy-makers but
  - Some researchers have questioned their accuracy
- Clever idea: natural disasters as exogenous shocks to the hospital choice set
- Provides an opportunity to compare models' predictions for resulting changes in consumer choices to realized changes.

Results

Results in many ways not surprising

- Models allowing for exible interactions between patient characteristics and unobserved hospital quality perform the best
- Models that include hospital characteristics (interacted with patient attributes) but no hospital xed e ects have the worst t

Results

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- Models allowing for flexible interactions between patient characteristics and unobserved hospital quality perform the best
- Models that include hospital characteristics (interacted with patient attributes) but no hospital fixed effects have the worst fit

Obvious question: how "good" is the fit of the typical model?

- Most of the paper compares models to each other rather than providing absolute measures of fit
- Statistics for their combination of models: RMSE on predictions of
  - aggregate shares: 0.7 - 2.2%
  - aggregate diversion ratios: 4 - 12%
  - individual level predictions: 19 - 27%
- Fit seems reasonable (at least at aggregate level)
- Equivalent numbers for (best of the) individual models?

Merger Policy Counterfactuals

Final section: implications for hospital merger policy analysis

- Idea: under simple bargaining models (Capps et al 2003), projected change in *WTP* from a merger (ΔWTP) is correlated with price effect
- This makes *WTP*, ΔWTP important tools for policy analysis
- Authors want to consider accuracy of the estimated demand models in terms of variables used for merger analysis
  - They compare predicted ΔWTP from counterfactual mergers across models with different RMSE.

Potential issue:

- Agree that *WTP* is an important object in the bargaining game
- Exactly how it enters will vary across models
- Authors assume insurer objective function linear in *WTP* (Capps et al 2003)
  - So ΔWTP is the right variable to consider
- But in a model where insurers maximize *pro t*, and *WTP*

Conlon and Mortimer (2015)

Finally: mention related paper by my colleague Chris Conlon
- 2 methods for merger evaluation and measuring diversion ratios
  - Estimate model of demand, predict own- and cross-price elasticities
  - Experiment to exogenously remove a product, observe the products to which consumers actually switch
- They find significant diversion to remaining products
- And show how best to use experimental data to predict price effects of mergers.

Paper is clearly related (and is already cited) - and also helps justify the form of the experiment in this paper.

Other Comments

Obvious issue re hurricanes: do they independently affect demand?

- Cheap comment: authors discuss it; not much more they can do
- But of course it could matter.
- Example: LES of Manhattan, quite close to Bellevue, was flooded for some time after Hurricane Sandy.

Finally: how well should we expect these models to do?

- RMSE measures accuracy re: consumer movement across hospitals
- Which is not what the maximum likelihood algorithm is trying to fit
- MLE fits average market shares
- No surprise that fit is best for average shares, worst for individuals
- Or that adding interactions helped a lot.

Overall, encouraging results for these models!