The Accuracy of Hospital Merger Screening Methods

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*The views expressed in this presentation are mine and not necessarily those of the FTC or any individual Commissioner.

Outline

- Objective:
  - To test the pre-merger predictions of various hospital merger screening tools against the post-merger price changes for a relatively large sample of consummated hospital mergers
- Outline
  - Literature/Case Review:
    - History of hospital antitrust enforcement
    - Hospital competition literature
  - Hospital merger screening tools
  - Mergers and price change measurement
  - Comparison of pre-merger predictions and post-merger price changes

Hospital Merger History

- 1981-1992: 397 hospital mergers
  - FTC/DOJ challenged 15
  - 14 preliminary injunctions granted
- 1993-2000: 1,042 hospital mergers
  - FTC/DOJ/CAAG challenged 8
  - 0 preliminary injunctions granted
- Why the change?
  - For-Profit vs. Non-Profit
  - Increasing reliance on Elzinga/Hogarty test and Critical Loss Analysis for geographic market definition
  - Judicial contempt for and general backlash against HMOs
  - State action immunity

Hospital Competition Research

- Extensive literature on price and quality effects of hospital competition and mergers
- New economic models and tools developed for hospital competition analysis:
  - Town and Vistnes (2001)
  - Capps, Dranove, and Satterthwaite (2003)
    - Willingness-to-Pay (WTP)
  - Gaynor and Vogt (2003)
  - Antwi, Gaynor, and Vogt (2013)
    - Logit Competition Index (LOCI)
  - WTP and LOCI merger price effects driven largely by diversion
  - Analogous to Upward Pricing Pressure Index (UPPI)

FTC Activities

- Hospital Merger Retrospectives Project
  - Detailed study of four consummated hospital mergers
- Merger Litigation Task Force
- Evanston Northwestern Healthcare/Highland Park Hospital
  - FTC challenged consummated merger using administrative litigation

Recent Merger Challenges

- Inova/Prince William Hospital (2008)

- Promedica/St. Luke's (2011)

- OSF/Rockford (2011)

- Phoebe Putney/Palmyra (2011)

- Reading Health/SIR (2012)

- Capella/Mercy Hot Springs (2013)*

- St. Luke's/Saltzer Medical Group (2013)

* No complaint was issued in this case, but the FTC's Bureau of Competition stated that it recommended a challenge before the merger was abandoned. See http://www.ftc.gov/news-events/press-releases/2013/06/statement-ftc-competition-director-richard-feinstein-todays

Use of New Screening Tools

- ProMedica/St. Luke's
  - Diversion ratios, WTP, and merger simulation
- OSF/Rockford
  - Diversion ratios and WTP
- UKCC Private Health Care Market Investigation
  - LOCI
- Research on the accuracy of the new tools:
  - Fournier and Gai (2007): Compares WTP-based merger simulation to the price change for one merger
  - May (2013): Compares WTP changes to price changes for two mergers
  - Brand and Balan (2013): Compares diversion ratios, WTP changes, and merger simulations to post-merger price changes in data produced by a virtual market/bargaining model

Overview

- Comparison of screens to price changes for 23 consummated mergers
- Multiple screens evaluated, including traditional market shares/concentration measures
  - All screens constructed with data usually available in initial investigation
- Selection bias due to active antitrust enforcement (Carlton (2009))
  - Sample includes 10 mergers from North Carolina 1997-2001
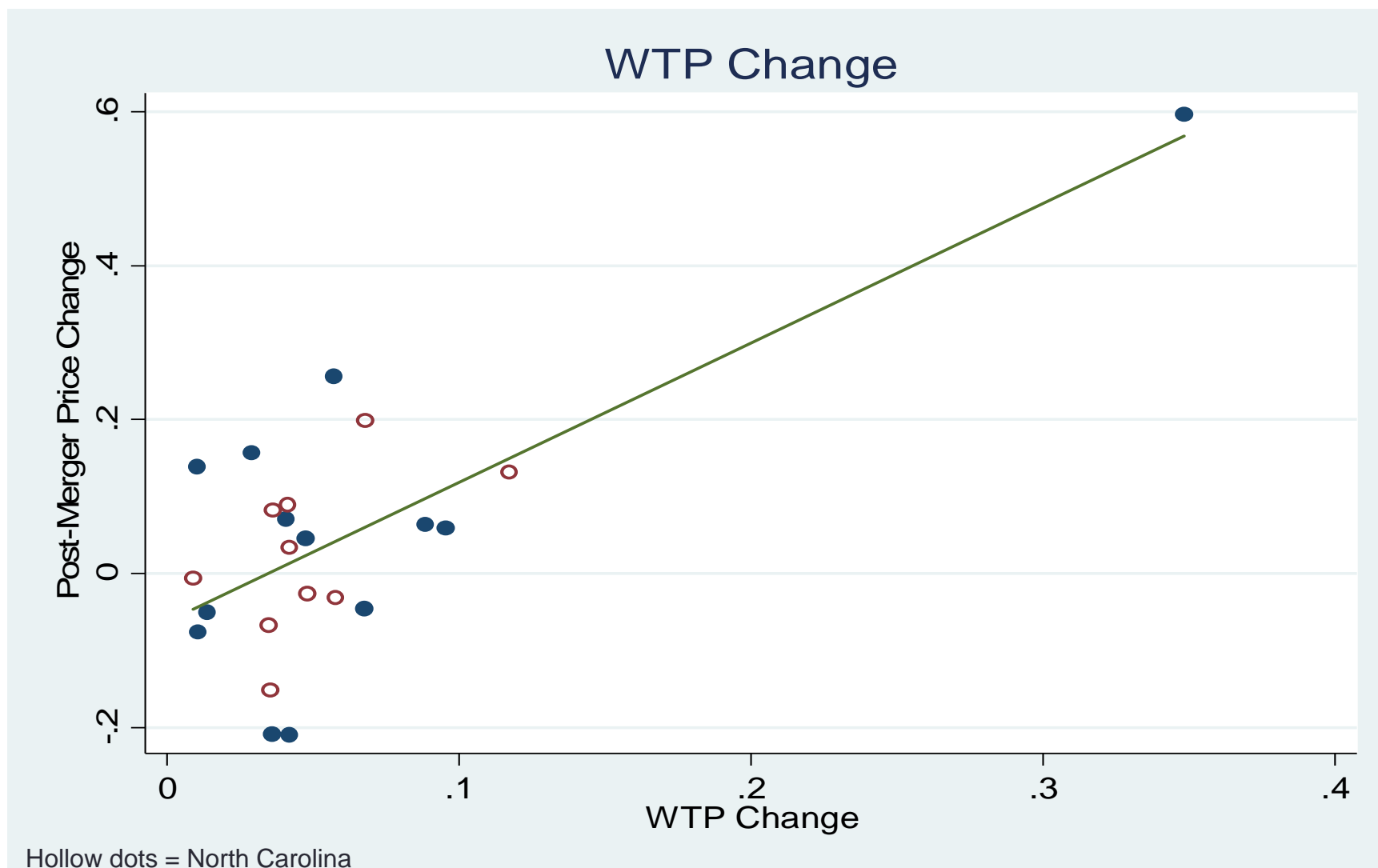
The Contenders

- Herfindahl-Hirschman Index (HHI)
  - Hospital-location-based bed shares in the Hospital Referral Region (HRR)
    - Approximates EH/CLA markets
  - Patient-location-based discharge shares in the acquired hospital's Hospital Service Area (HSA)
  - Patient-location-based discharge shares in the combined hospitals' weighted service area
- Diversion Ratios
- WTP change
- LOCI price change estimate
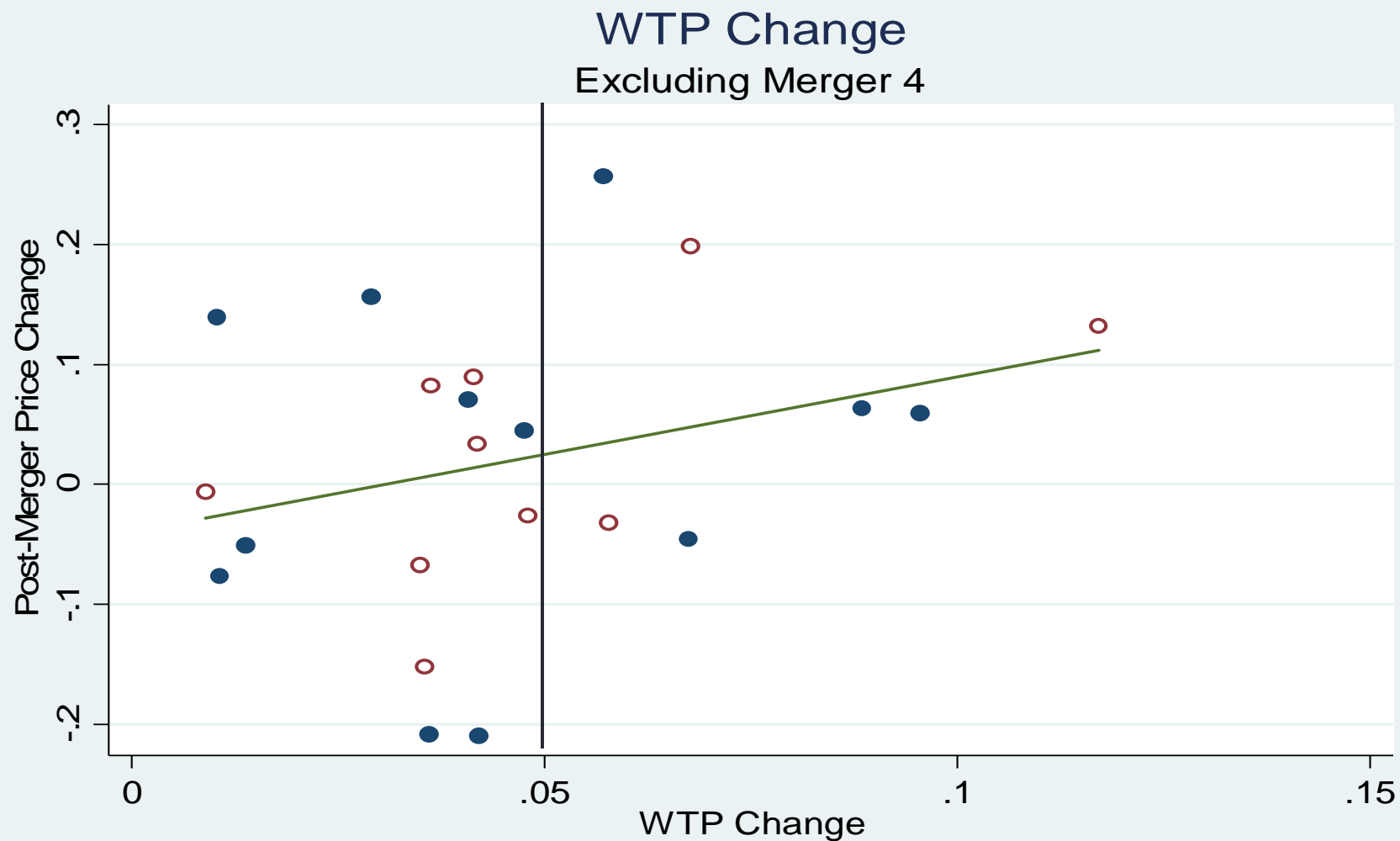- WTP-based merger simulation

The Mergers

- 23 mergers of competing general acute care (GAC) hospitals across 7 states

- Post-merger case-mix-adjusted commercial price change relative to controls
  - Price measured using method of Dafny (2009)
  - In most cases, control group is the set of all non-merging, urban GAC hospitals with >100 beds in the state (but outside of the merging hospitals' MSA)

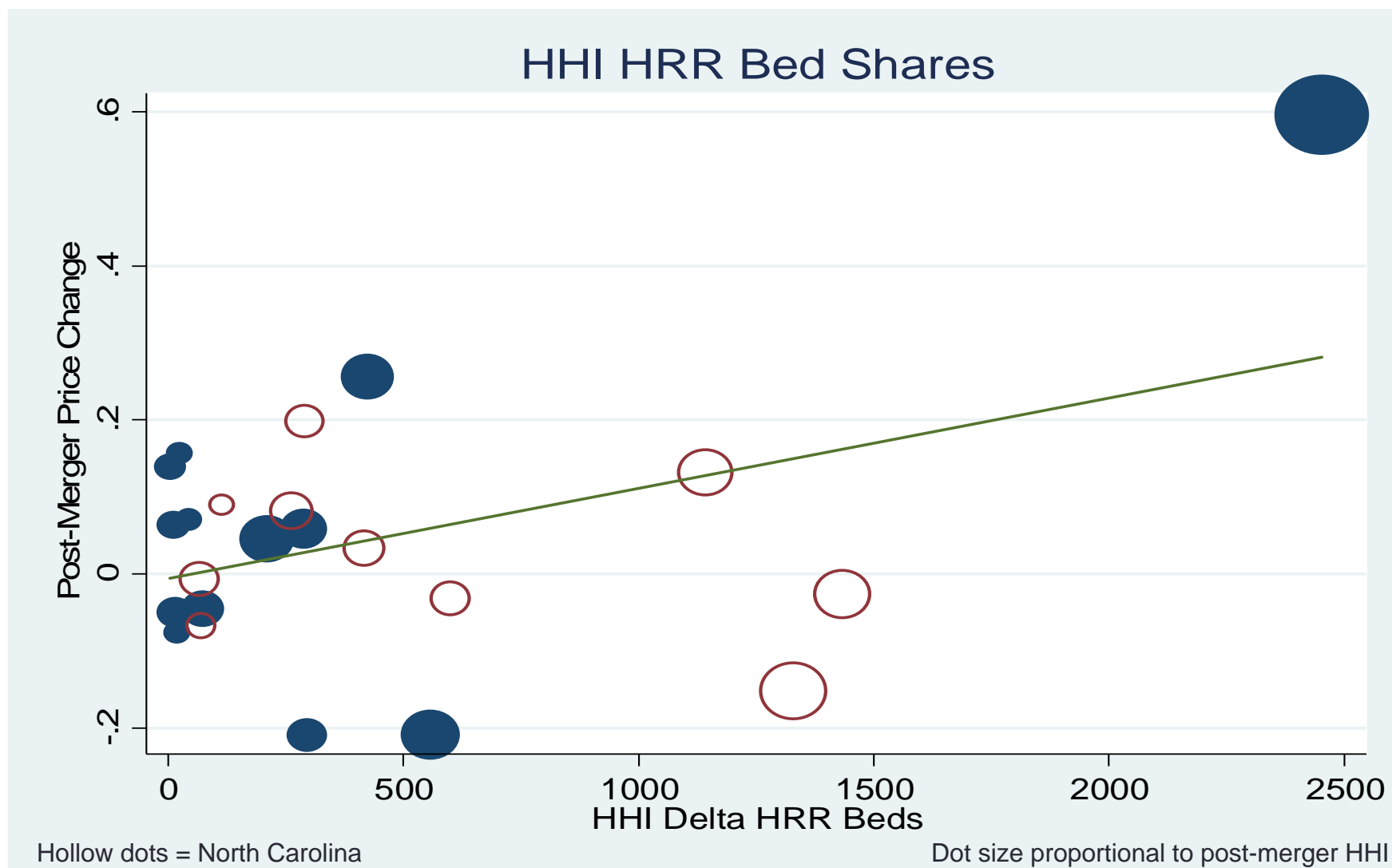- All measures are based on GAC services performed at non-federal short-term GAC hospitals
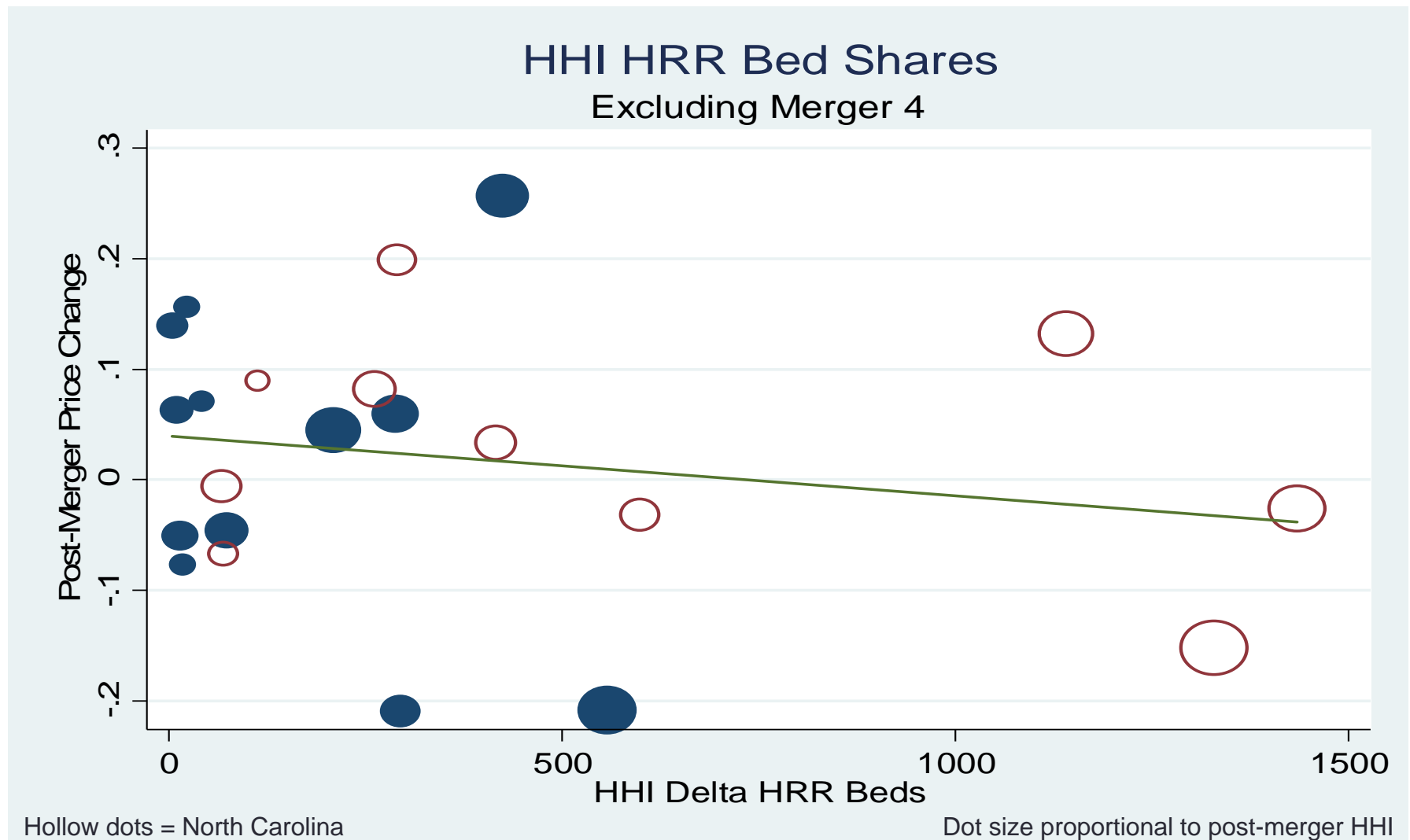
The Results: WTP

Hollow dots = North Carolina

The Results: WTP

WTP Change
Excluding Merger 4

Post-Merger Price Change vs WTP Change

Hollow dots = North Carolina

The Results: HHI

The Results: HHI

HHI HRR Bed Shares
Excluding Merger 4

Hollow dots = North Carolina   Dot size proportional to post-merger HHI

Conclusions

- Diversion ratios, WTP, and LOCI provide information not captured with traditional measures
- Merger simulation performs poorly, but this is likely due to the limitations of the data
- All of the HHIs perform poorly
- Going forward, we need:
  - Better data to calibrate models and measure merger effects
    - All-payer claims data
  - Better models of hospital competition