

Discussion:

Diagnostic Price Dispersion

by Matthew Grennan and Ashley Swanson

Discussant: Tobias Salz

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■ In **business to business** markets these and other forces all come together:

- Managerial fixed costs / bargaining ability.
- Information frictions.
- Preference heterogeneity.
- Cost differences.

View of practitioners (*www.healthcarefinancenews.com*):

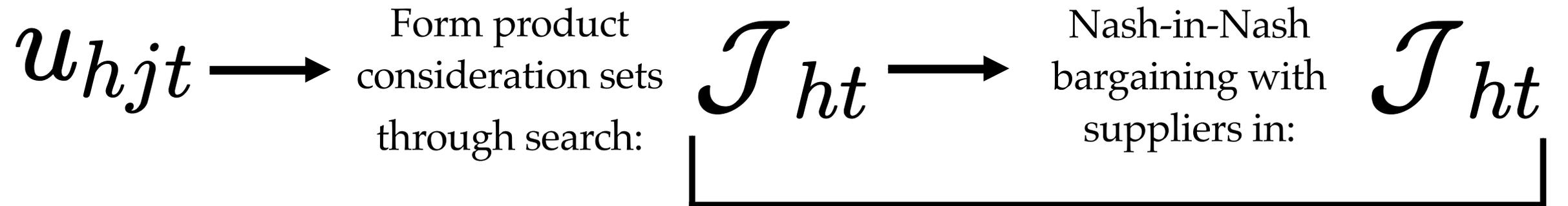
"Hospitals need an experienced supply chain manager who can get a good contract, communicate with physicians, who is part of boardroom discussions over strategic planning, and who uses more than a spreadsheet to keep track of spend."

"When you look at the various constituents -- getting it from distributors, group purchasing organizations, etc. -- trying to triangulate all that information can be very daunting. A lot of organizations simply can't do it, or they're doing a portion of it."

Model:

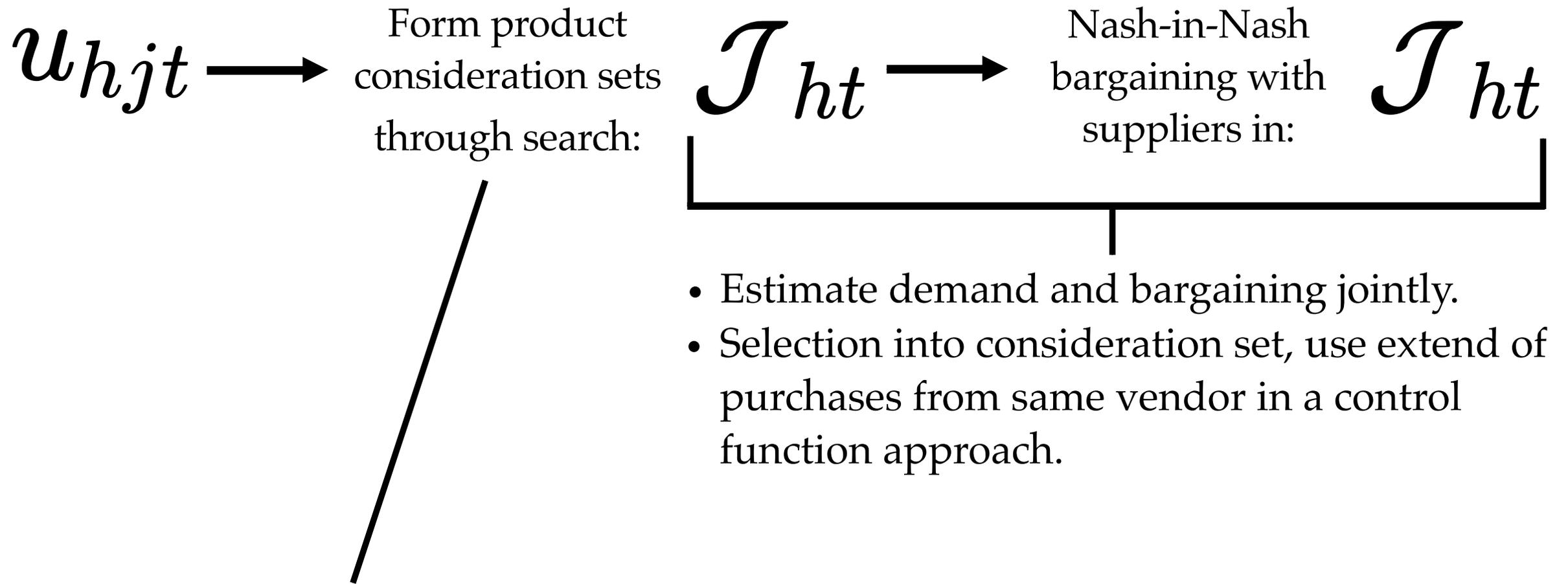


Model:



- Estimate demand and bargaining jointly.
- Selection into consideration set, use extend of purchases from same vendor in a control function approach.

Model:



$$u_{ij t} = \theta_h + \theta_{jt} + \theta_{v(j),hrr(h)} + \xi_{jht}^o + \xi_{jht}^u$$

$$E_{\xi, \nu} [AV_{jht}(\theta, \beta, \gamma; \emptyset \cup j)] > sc_{jht} \quad \forall j \in \mathcal{J}_{ht}$$

$$E_{\xi, \nu} [AV_{kht}(\theta, \beta, \gamma; \mathcal{J}_t)] < sc_{kht} \quad k \in \mathcal{J}_t \setminus \mathcal{J}_{ht}^{\text{search}}$$

Comment 1: consideration sets

- **Consideration set:** *all products purchased in the past.*
- Crucial role in identifying search cost from bargaining.

Some Suggestions:

- Robustness to using rolling window consideration set.
- Consideration sets lead to asymmetric substitution patterns: recently formalized in Abaluck and Adams (2018).
- Use vendor instrument to look at how purchase propensity and substitution patterns changes after being "randomly" placed in the consideration sets.

Comment 2: Put different explanations on equal footing.

Preferences:

$$\theta_h + \theta_{jt} + \theta_{v(j),hrr(h)} + \xi_{jht}^o + \xi_{jht}^u$$

Relative bargaining strength:

$$\frac{b_{jt}(h)}{b_{ht}(j)} := \exp(\beta_{jt} - \beta_h - 1 \{Info_{jh}\}^{pq} \beta_{jh}^{Info,pq} + \nu_{jht})$$

Search Cost:

$$sc_{jht} = \psi^0 + \psi^{t-1} \mathbf{1}_{\{j \in \mathcal{J}_{ht-1}\}} + \psi^{far} Z^{far} + \epsilon$$

Comment 3: Interpretation

- Bargaining and search cost. Why would we want to distinguish those? Is this captured here?
- Asymmetric vs non asymmetric information?
- Search cost is paid once, should be compared to discounted streams of expected purchases?
- Switching cost?
- Where does the bargaining power reside: GPO, vendor, manufacturer?

Comment 4: Group Purchasing Organizations.

Background

- Hospitals bundle purchases in GPO's.
- Increase bargaining power, information.
- Most hospitals (> 95%) are part of at least one GPO.
- More than 80% of all purchases are made through GPO's.
- Have exemption from federal anti-kickback-statue.
- Have to disclose all fees to hospitals.

Some ideas:

- Do estimated bargaining weights reflect GPO's membership?
- Other variation determining consideration sets.

Other comments/questions:

- Preference for one-stop-shop purchase?
- Role of vendor versus product specific decomposition?
- Instrument constructed over multiple time periods?
- Cost synergies of vendors.

Very interesting and insightful paper!

- Combines different methodological approaches.
- Potentially applicable to a lot of settings.
- Expands scope of models with search frictions.
- For regulation and anti-trust considerations, decomposition is important.