“Exits, Tweets and Loyalty”

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Theory of voice

- Motivated by Hischman (1970) argument that consumers can use voice to express dissatisfaction to firms as an alternative to exit
  - Unclear prediction about voice and market power
- This paper: develops a formal model
- Shows:
  - without customer loyalty, no voice in equilibrium
  - voice happens in “relational contract” equilibrium with loyalty (stay with firm unless voice and no concession)
  - This equilibrium is more likely possible when firm has more market power
  - Clear prediction: more voice in concentrated markets

Empirical exploration of voice

- Tweets and airlines: excellent choices!
- Twitter data allows construction of a new measure for voice that is seen by researchers
- Airlines also a well-chosen setting
  - Small number of identifiable firms (with Twitter handles) but many markets with varying market structure based on geography.
  - Repeat customers so loyalty can matter.
  - Daily variation in quality measure across airlines-markets.

Main Empirical Results

- Main outcome is number of *tweets* about/to a specific airline in a location on a date
  - Link to location/airport based on profile (or tweet)
- Study the consumer response to daily quality variation in airline*airport on-time performance
  - Main models have airline-location, day-location FE
  - *Find more tweets when quality is lower*
- Test if tweet volume responds more when airline is more dominant in the location (*it does*)

Other Fun Results

- Content of tweets:
  - Same patterns hold for tweets specifically mentioning on-time performance and (to a lesser extent) for tweets not mentioning it
  - Consistent with some “time filling” tweets and some focused on delays
- Tweet sentiment:
  - Very negative and very positive (less so) tweets increase with lower quality

A Little about Airline Responses

- Look at airline public Twitter responses (missing direct messages)
- Find response probability is greater for customers who mention FF status (more valuable to airlines) and on-time performance but no effect of larger Twitter follower base

Technical questions

- Analysis very thorough and relationships seem quite robust
- A couple of questions that might spur additional robustness checks
  - Dominated cities/markets
  - Renormalization

Question about dominated cities

- Key interactions are airline shares >30% or >50%; 12% and 5% of data
- Are these dominated markets distinctive?
- Is concentration correlated with other *local* factors (like age, education) that could affect tweets (and their responsiveness)
- Possible to explore this by controlling for local area factors *interacted with* performance. Maybe use demographics or a dominance measure at the city level (i.e., largest airline).

Question about variable normalization

- Tweets and on-time performance are “z-scores”
- Common reason for normalization in education is test scores not meaningful/consistent across tests
  - Usually done for an entire sample or test
- Tweets and delays don’t have that same problem
- Issue seems more about different mean/stdev. across airline/city combos; functional form?
  - Perhaps instead rescale to passengers at the airport/airline level?
- Paper already uses log(x+1) and finds robust

Questions about voice

- First large-scale empirical analysis that shows relationship between voice and market power

- Couple of questions:
  - How should we think about the voice measured by Twitter for airlines about performance?
  - What can we learn about the impact of voice?

Voice as customer service?

- Theory presents voice as “after the fact” complaint that generates a possible concession
- When flights are delayed or canceled, customers contact airlines to rebook; service is not done
  - Airlines encouraged customers to use Twitter for that function as an alternative to in-person, phone, online
- Is this part of what the authors are measuring?
  - Consistent with results for airline responses
- If so, it is a typical or unusual type of voice? Are there comparable applications in other industries? (maybe cable outages?)

Does voice matter?

- Voice is outcome: causality *from* performance, *from* market power (interacted with performance) to voice
- But does voice help discipline firms? Is it a substitute for exit?
- What can authors say about *the impact of voice*?
  - On customer loyalty? On performance/quality? On market power? On CS and profits?
- What about the effects of new "technology of voice" like Twitter? (the web, the telephone…)

The End