Seller Search and Market Outcomes in Online Auctions

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1. Introduction

• About Seller Search and Market outcomes in Online Auctions
  – Management Science 56, October 2010 INFORMS
  – Jason Kuruzovich
    • Lally school of management and Technology, Rensselaer Polytechnic Institute, Troy, New York
  – Siva Viswanathan, Ritu Agarwal
    • Robert H. smith School of Business, university of Maryland, college Park Maryland
1. Introduction

• IT influence on market transactions
  – To buyers
    • Lower search cost
    • Lower prices
    • Higher consumer welfare
  – To Sellers
    • Search buyers Product preferences
    • Willingness to pay
1. Introduction

• In this study- Price associated
  • The length of time(seller)
  • Seller search in Other Websites(S.O.W.)
  • How market characteristics

- Search in other websites
  - Online auction
    - Duration of search
  - Market characteristics

- Online auction
  - Sale price
1. Introduction

• Methodology
  – Used vehicle online auction (ebay)
  – Unique Vehicle Identification Number (VIN)
    – Using VIN can track one item price in several auctions
2. Research Framework and hypotheses

• Sale Price
  • Increasing the reserve price (start price)
  • \(\rightarrow\) higher sale price

• Seller search
  • Longer days auctions \(\rightarrow\) higher price

• Search in Other Website

• Expected Mean & Expected Variance
  • Market characteristics
3. Data & Research Methodology

- \( E[y_i \mid C_i] = c_i b \)
  - \( y_i = \) high bid,
  - \( C_i = \) auction & vehicle characteristics

\[
V[y_i \mid C_i] = E[(y_i - E[y_i \mid C_i])^2]
\]

\[
E[V[y_i \mid C_i]] = E[(y_i - c_i b)^2]
\]

\[
E[(y_i - c_i b)^2 \mid c_i] = \exp(c_i a)
\]

\[
E[\ln E((y_i - c_i b)^2) \mid c_i] = c_i a
\]
4. Results

- 12.21 days (13.77 std)
- 1.83 auctions (1.74 std)

- Increase 1 std in S.O.W.
  - Increase price 1.2%(216$)

- Increase 1 std in Duration of search
  - Increase price 3.2%(581$)

- Expected mean & sale price is strongest overall effect
5. Discussion

- Positive relationship search time & price (0.18)
- Positive relationship SOW & price (0.08)
- Market characteristics (Expected mean, Variance)
6. Conclusion

• Online Auction For seller’s
  – Change seller behavior
    • Reducing search cost -> long auction period
    • -> high bid -> more profit