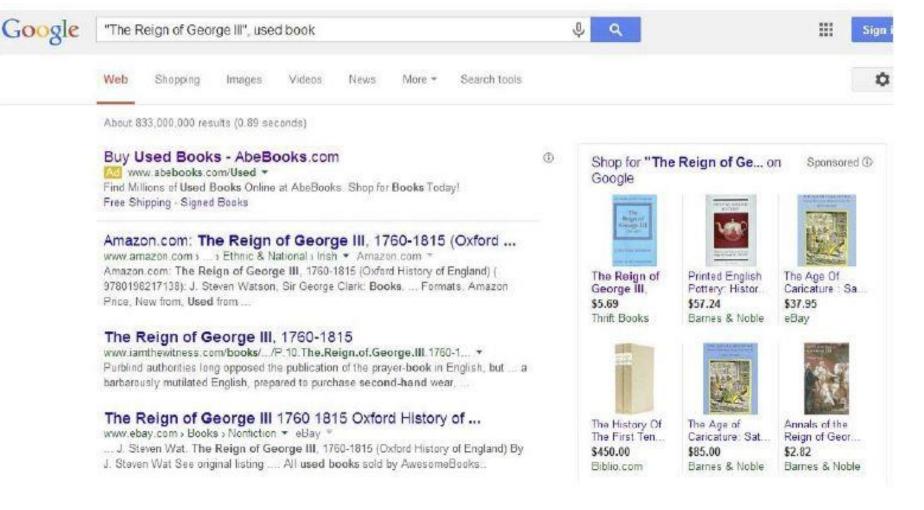
# Match Quality, Search, and the Internet Market for Used Books

Based on Ellison and Ellison 2014

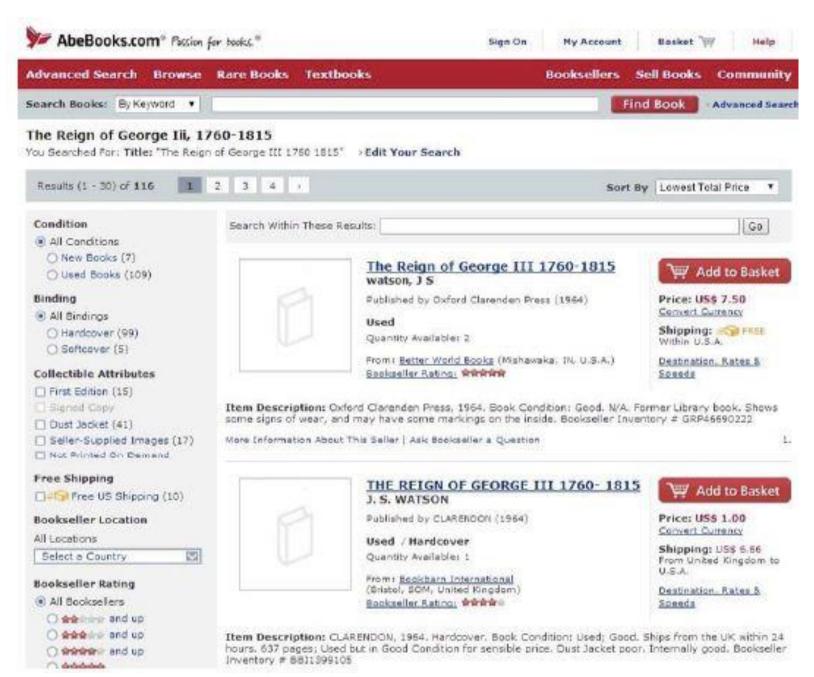
### Used Book Market

- Traditionally very unconcentrated, many small, independent brick and mortar stores.
- Some used book dealers started websites with listings in 1994.
- Several firms started aggregating listings in the late 1990s: Bibliofind (1996), AbeBooks(1996), Bookfinder (1997), Alibris (1998), Biblio (2000).
- AbeBooks started aggregating listings from physical stores in British Columbia, but grew to 100 million listings by 2007.
- Abebooks was acquired by Amazon in 2008, started having listings appear as "buy used" in 2010.

## There are many ways to buy used books online



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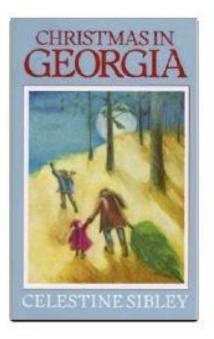


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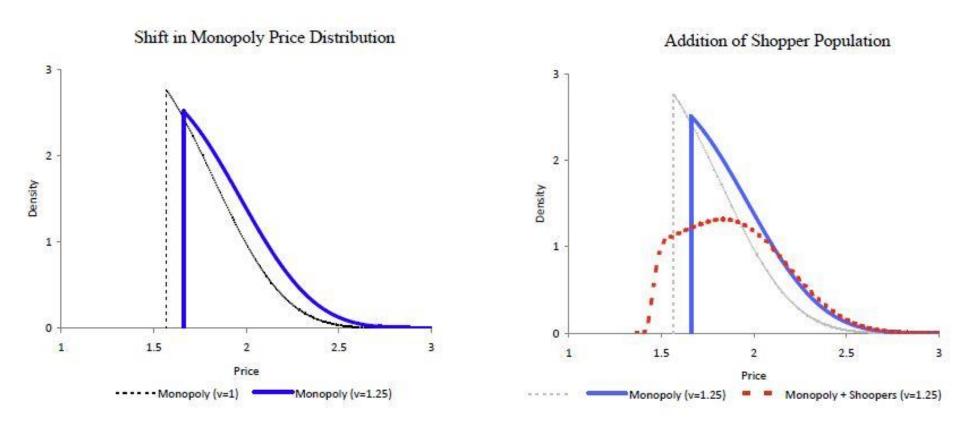
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## Model reflecting match quality and search costs

- Brick and mortar stores were de facto monopolists, like the Diamond model. (We allow for different consumer arrival rates, though, which generates equilibrium price dispersion.)
- When used books moved online, there were two effects:
  - Finding a particular title became much easier, resulting in something like an increase in demand.
  - Some consumers behaved like before, but others became "shoppers," like in the Stahl model.

#### Two effects



Courtesy of Glenn Ellison and Sara Fisher Ellison.

## **Empirical investigation**

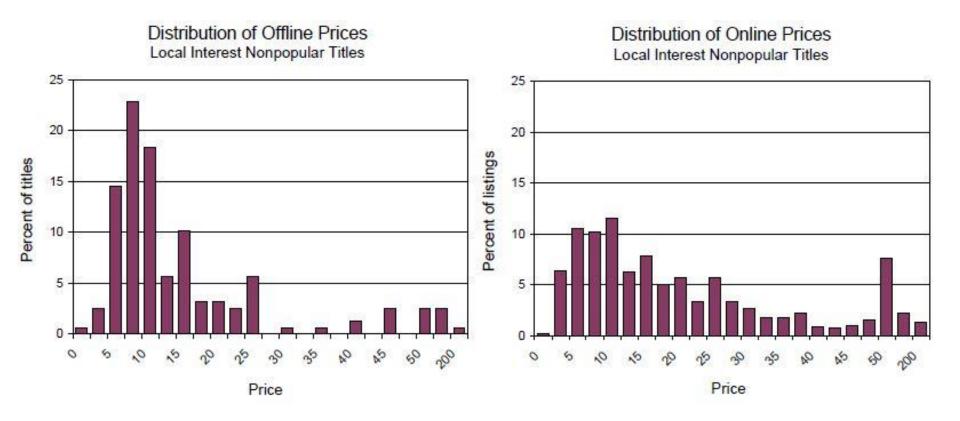
- 300+ titles
  - From brick and mortar stores
  - Matching data online, both 2009 and 2012
  - Three types of titles
    - "standard"
    - local interest
    - popular

#### Comparison of price distributions



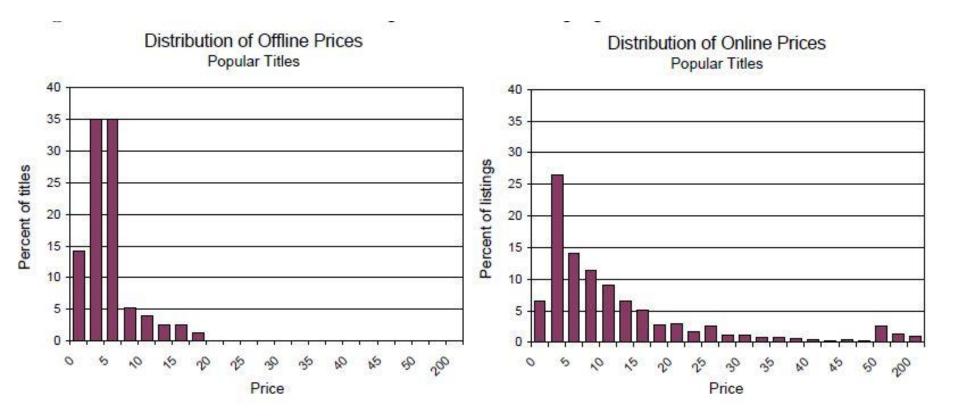
Courtesy of Glenn Ellison and Sara Fisher Ellison.

#### Comparison of price distributions



Courtesy of Glenn Ellison and Sara Fisher Ellison.

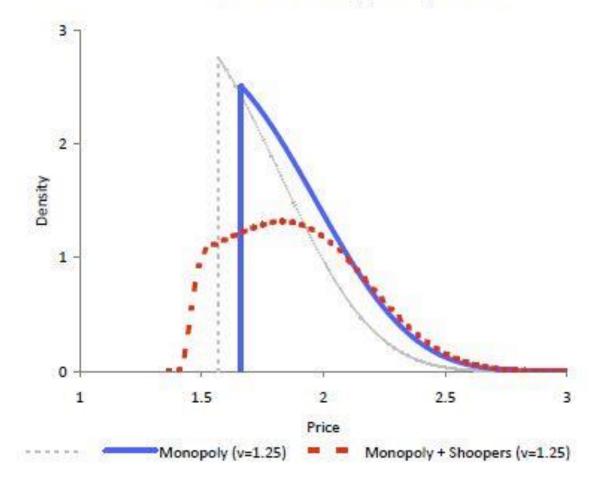
#### Comparison of price distributions



Courtesy of Glenn Ellison and Sara Fisher Ellison.

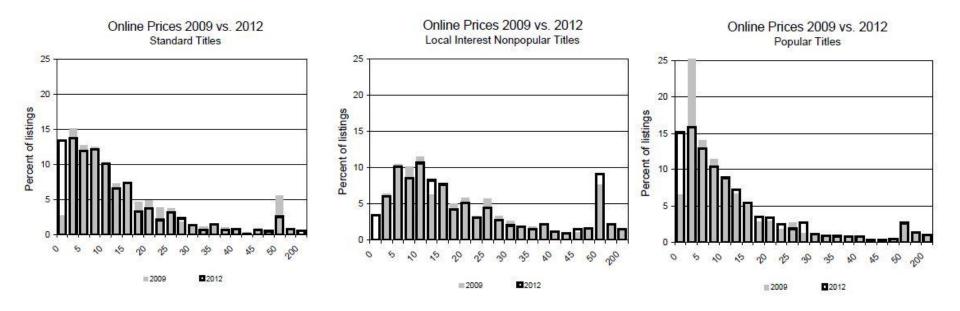
#### But what about the shoppers?

Addition of Shopper Population



Courtesy of Glenn Ellison and Sara Fisher Ellison.

#### Online price distributions over time



Courtesy of Glenn Ellison and Sara Fisher Ellison.

### What is the bottom line?

- Many online prices are much higher than brick and mortar prices.
- A model highlighting two effects, improved match quality and increased competition due to lower search costs, fits the data well.
- Evidence from different types of books also supports our model.
- Estimates from a structural model suggest that the shift online increased both profits and consumer surplus.

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