# 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 

## Google

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## About $833,000,000$ results $\langle 0.89$ seconds)

## Buy Used Books - AbeBooks.com

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## The Reign of George Iii, $1760-1815$

You Searched For: Title: "The Reign of Georgettt 17501815 " > Edit Your Search


Item Description: GLARENDON, 1954. Hardoover. Book Conditiont Used; Good. Ships from the UK within 24
hours. 637 pages; Used but in Good Condtion for sensible arice. Dust Jacket poor, Intemally good. Bockseler Inventory \#8011999105




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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

Shift in Monopoly Price Distribution


Addition of Shopper Population


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

Distribution of Offline Prices
Local Interest Nonpopular Titles


Distribution of Online Prices
Local Interest Nonpopular Titles


Courtesy of Glenn Ellison and Sara Fisher Ellison.

## Comparison of price distributions

Distribution of Offline Prices
Popular Titles


Distribution of Online Prices
Popular Titles


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



Online Prices 2009 vs. 2012 Local Interest Nonpopular Titles


Online Prices 2009 vs. 2012
Popular Titles


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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