Remarks on Vertical Restraints Offline & Online

Ali Hortaçsu
Department of Economics
University of Chicago

VR 1.0: Pro-competitive?

- Vertical contracts and/or integration help align incentives of upstream and downstream entities
- In many situations, alignment of incentives of producers can **<u>increase</u>** consumer and overall social surplus

❑ Elimination of double marginalization

❑ Alleviation of hold-up concerns over relationship-specific investments (e.g. R&D, advertising/brand maintenance)

VR 1.0: Anti-competitive?

- Vertical contracts and/or integration help align incentives of upstream and downstream entities

- In many situations, alignment of incentives of producers can **<u>decrease</u>** consumer and overall social surplus

- RPM/MFN to facilitate collusion, or as commitment device
- Foreclosure/raising rivals' costs to soften downstream competition

VR 1.0: Practice

- In most settings, both pro- and anti-competitive forces co-exist
- Hence, application of "rule of reason," following the Leegin decision
- Existence of concentrated downstream and upstream market structures, lack of obvious mechanisms for efficiency enhancement, presence of strategic complementarities downstream raise concern for anti-competitive forces

VR 1.0: Empirical Evidence

- Comparison of prices, quantities, entry/exit "With VR" vs. "Without VR"

- Challenges:
  - Large enough treatment vs. control groups
  - Endogeneity: VR are not randomly adopted; indeed, they are very carefully considered agreements
  - Need "plausibly exogenous" drivers of VR

- Even if credible evidence on effects are found, findings are context-specific because of the pro- and anti-competitive effects of VR

VR 1.0: Evidence on Vertical Mergers

Chipty (2001, AER)

- Vertical mergers and foreclosure in cable TV distribution and programming
- Cross-sectional data on 2000+ local cable operators and 133 program providers in 1991
- VR leads to exclusion of rival premium programming that directly rivals own premium programming (esp. home shopping channels and movie channel). Less evidence re: exclusion of non-premium services
- Prices higher in integrated markets, but so is cable penetration rate. Better promotion of products by integrated providers?
- Overall, some evidence for foreclosure, but overall welfare effect may be positive

VR 1.0: Evidence on Vertical Mergers

- Chipty is careful to include many controls, but the data data is cross-sectional

- Typical critique: what if there are market-level unobservables correlated with integration status?

- Re-examine key result: vertical integration -> higher cable penetration

- But what integration happens in markets that have higher demand for cable programming? We can not conclude that VI **causes** higher cable penetration.

VR 1.0: Evidence on Vertical Mergers

Gilbert and Hastings (2005, JIE)

- Effects of vertical mergers in gasoline
- Panel data on local wholesale gasoline prices in Western U.S., 1996-1998
- Upstream acquisition of downstream firm leads to higher wholesale price, controlling for downstream market structure
- Price increase higher in markets where downstream partner had more contact with independent rivals
- Authors interpret this as evidence for "raising rival's cost"

VR 1.0: Evidence on Vertical Mergers

- Panel data allows Gilbert and Hastings to focus on within market changes in prices
- Variation in vertical integration across markets (due to the same merger) is assumed to be exogenous
- Justification: merger motivated by overall effect summed across markets; not by its effect on individual markets
- Authors do not look at effect on retail prices or quantities

VR 1.0: Evidence on Vertical Mergers

Hortaçsu and Syverson (2007, JPE)

- Vertical mergers of cement and ready mixed concrete
- Detailed plant level data covering 30 years
- Use G-H strategy of looking at within-merger/across-market variation in vertical integration
- Also use IV introduced by relaxation of explicit vertical merger thresholds due to 1982 antitrust reforms
- Findings: vertical integration associated with lower prices, higher quantities, higher efficiency/lower costs
- Patterns persist in more concentrated markets as well, suggesting an overall pro-competitive impact of vertical mergers

VR 1.0: Evidence on Vertical Contracts

Mortimer (ReStud 2006):

- Introduction of agency/revenue-sharing contracts in video rental industry, enabled by Rentrak, Inc.
- Prior to revenue-sharing/agency, studios followed wholesale model with rental outlets, with 6 month "window" before switching to retail sales
- Revenue sharing leads to **decrease** in rental prices and **increase** in quantities across markets
- Estimates structural model of demand and firm conduct to quantify effects on firm profits and consumer welfare
- Significant producer and consumer welfare **increases** due to elimination of double marginalization

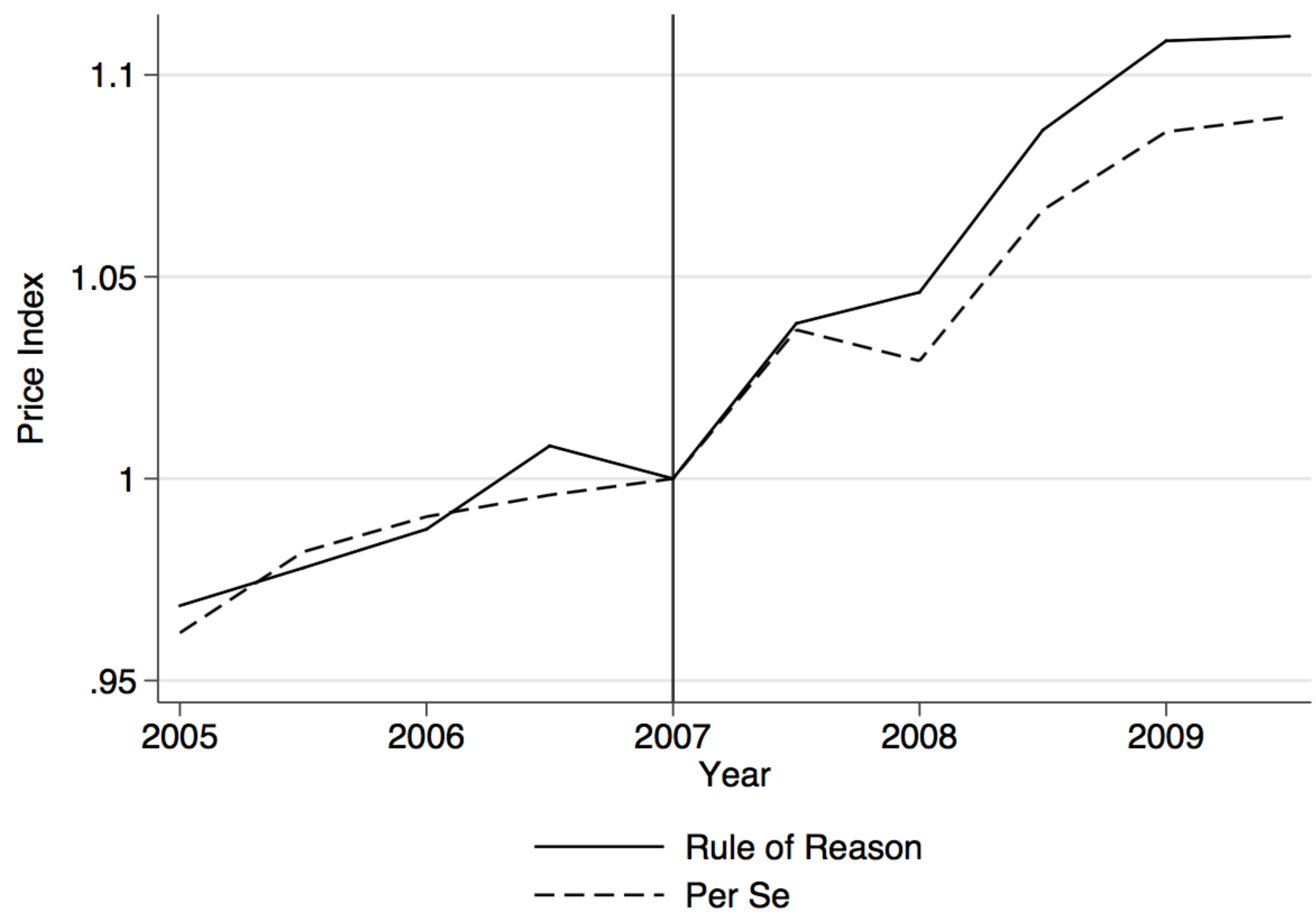
VR 1.0: Evidence on Vertical Contracts

Mackay and Smith (2014):

- Following Leegin (2007), some U.S. states allowed RPM under "rule of reason," while others continued to deem RPM illegal
- Study prices of close to 1000 supermarket goods in states that allow RPM vs. states that do not
- 8.4% of goods show statistically significant price increases in states that allow RPM (compared to price changes in states that did not allow RPM), with median price increase of 5.3%
- 9.4% of goods show statistically significant quantity declines in states allowing RPM (vs. states that do not)

Mackay and Smith (2014)

Figure 1: Price Index by Legal Treatment



VR 1.0: Evidence on Vertical Contracts

Mackay and Smith (2014):

- The authors do not have data on actual RPM contracts; hence this is an indirect assessment
- While they utilize a dif-and-dif approach that rules out common trends shared by states, the 2007-2009 period is one of great economic turmoil, with heterogeneous developments across states
- M&S also test whether price increases are associated with higher concentration downstream and upstream, and find higher price increases in markets with more concentrated downstream retailers

VR 2.0?

Vertical restraints remain extremely relevant online

- Content distribution
- Travel services
- Online sales channels for physical goods

Terms perhaps slightly different

- “Wholesale/agency” vs. “linear price/revenue sharing”

- “Rate-parity” vs. MFN/RPM

VR 2.0?

Pro-competitive forces:
- ❑ E.g. “Rate-parity” enables travel intermediary to invest into promoting hotel, without fear of undercutting by “discount” portals

- ❑ E.g. “Agency” contracts help eliminate double marginalization

Anti-competitive forces:
- ❑ E.g. “Rate parity” and MFN facilitate price fixing

- ❑ E.g. “Agency + MFN” forecloses low-cost entrants/competitors

Case Study: E-book (Apple vs. DoJ)

Price

Wholesale

Agency

Wholesale

Jan 2010

Apr 2010

Apr 2012

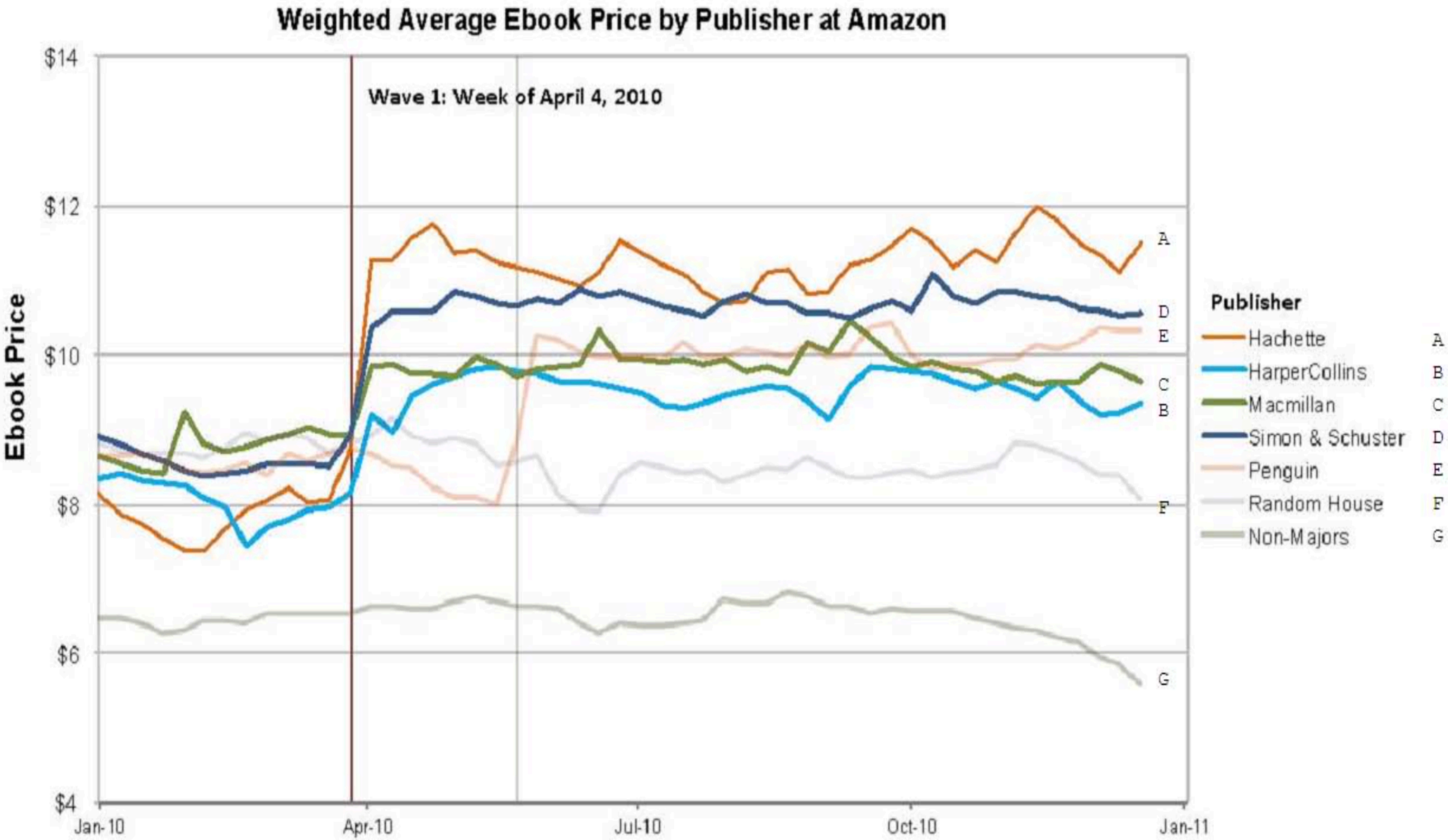
Sep 2012

Apple launches the iPad and negotiates an agency deal with MFN clause

Apple enters the e-book market and Amazon switches to agency. Prices go up by 18% and, for NYT Bestsellers, up by 42%

DOJ sues Apple and 5 publishers for conspiring to raise prices,

3 publishers settle, rest to follow

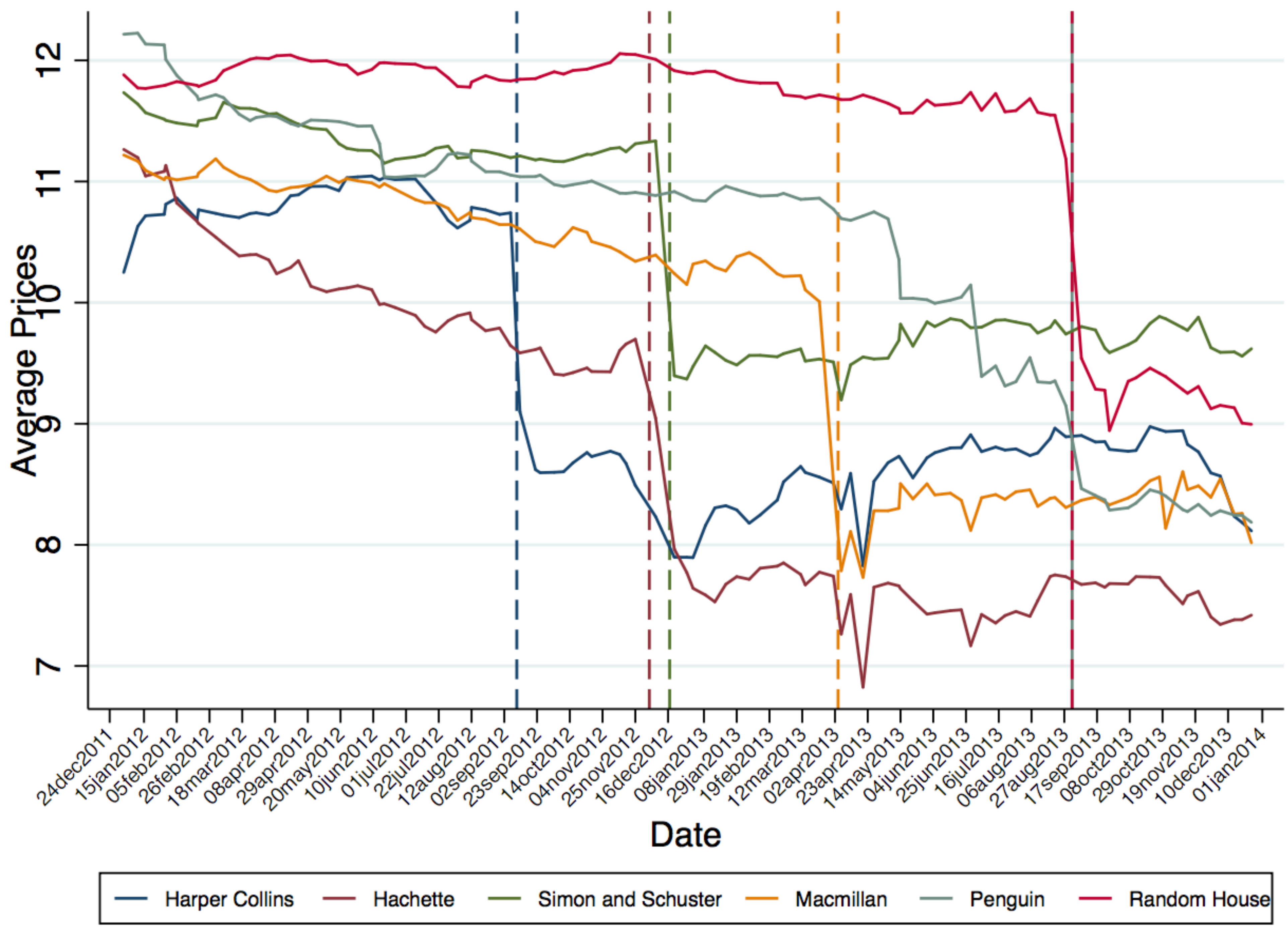


Weighted Average Ebook Price by Publisher at Amazon
Wave 1: Week of April 4, 2010
Ebook Price
$14
$12
$10
$8
$6
$4
Jan-10
Apr-10
Jul-10
Oct-10
Jan-11
A
D
E
C
B
F
G
Publisher
Hachette A
HarperCollins B
Macmillan C
Simon & Schuster D
Penguin E
Random House F
Non-Majors G

De los Santos and Wildenbeest 2014

- Before Apple's entry, Amazon's pricing strategy included selling most New York Times best sellers and new releases for $9.99.
- After Apple's entry, prices of e-books increased almost immediately to the maximum price tiers set by the agency agreement with Apple (most predominantly $12.99 and $14.99): this means that a NYT bestseller at Amazon jumped from $9.99 to $13.99.
- All of the publishers settled with DoJ and switched back to wholesale model. Different publishers settled at different dates.
- The authors find that the DOJ lawsuit caused a decrease of prices by 18% at Amazon and 8% at Barnes&Noble.

Post-settlement e-book prices on Amazon (De Los Santos and Wildenbeest 2014)



Discussion

- Difficult to find a pro-competitive explanation for the agency/MFN contract with Apple
- If aim was to eliminate double marginalization, we should see price decline after agency
- Indeed, District Court decided on a “per-se” price-fixing ruling against Apple

Discussion

- Why did publishers agree to Apple's 30% commission + MFN terms, even though this meant less revenue compared to wholesale model with Amazon?

- Theory of the DoJ: Publishers were worried Amazon's low pricing cannibalized hardcover sales, was going to lower price expectations of consumers, and was going to lead to Amazon disintermediation in the long run

- Foros, Kind, Shaffer (2014): even without hardcover cannibalization concern, agency pricing may soften competition between Amazon & Apple and lead to higher prices

Discussion

- Johnson (2013) suggests Amazon's loss-leader strategy is to lock-in consumers to Kindle platform in order to exercise market power later
- Thus, in the long run, agency may have been better
- However, Amazon prices still low after iPad introduction made Kindle dominance unlikely
- Why does Amazon continue with aggressive pricing of e-books? Broader customer acquisition and retention strategy?

VR in Online travel

- “Rate parity” clauses imposed by travel intermediaries
- Treatment by U.S. courts very different than in e-books
- District Court ruling found such clauses pro-competitive
- Unfortunately we do not have a before vs. after to study the effects of these contracts!

Conclusion

- Theoretically vertical contracts/restraints can have both pro- and anti-competitive effects
- There is a growing body of evidence for both types of effects
- U.S. stance after Leegin is mainly rule of reason
- While E-books case may open door for per se rulings on “retail” MFN type clauses, OTA case goes in the opposite direction
- We will continue to see interesting cases being brought forward in this area!