

Hearing #6 on Competition and Consumer Protection in the 21st Century

American University
Washington College of Law
November 7, 2018



Welcome

We Will Be Starting Shortly



Welcome Remarks

Gail Levine

Federal Trade Commission
Bureau of Competition



Antitrust Analysis of Data

Session moderated by:

Gail Levine

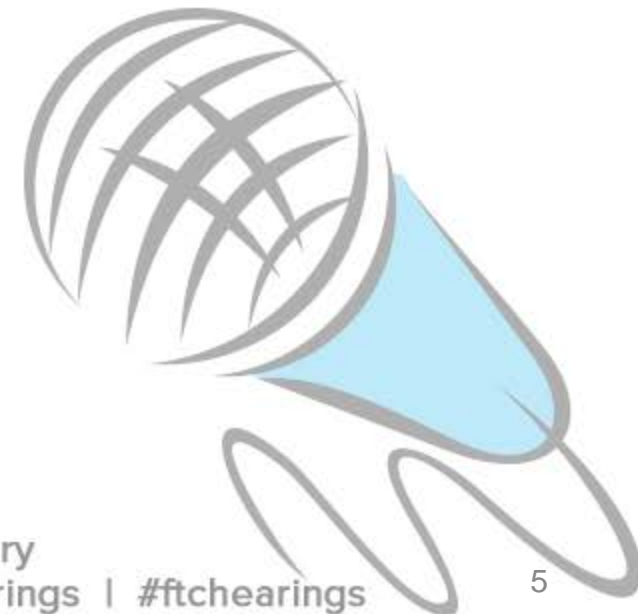
Federal Trade Commission

Bureau of Competition



Antitrust Analysis of Data

D. Daniel Sokol
University of Florida
Levin College of Law



Antitrust Analysis of Data

Michael Baye
Indiana University
Kelley School of Business



Antitrust Analysis of Data

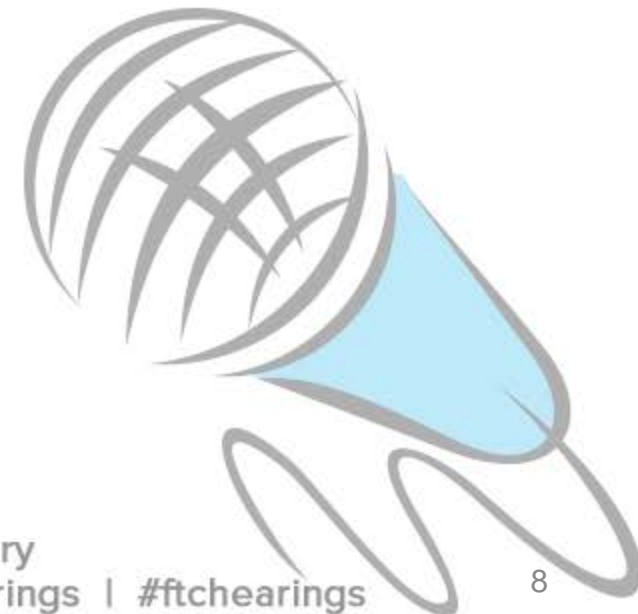
Jonathan Baker
American University
Washington College of Law



Antitrust Analysis of Data

Allen Grunes

The Konkurrenz Group



Antitrust Analysis of Data

Renata Hesse
Sullivan & Cromwell LLP



Antitrust Analysis of Data

Alex Okuliar
Orrick



Antitrust Analysis of Data

Panel Discussion:

D. Daniel Sokol, Michael Baye,
Jonathan Baker, Allen Grunes,
Renata Hesse, Alex Okuliar

Moderator: Gail Levine



Break

10:30-10:45 am



Remedies for Competition Problems in Data Markets

Session moderated by:

Katie Ambrogi

Federal Trade Commission
Office of Policy Planning



Remedies for Competition Problems in Data Markets

Andrew I. Gavil

Howard University

School of Law



Remedies for Competition Problems in Data Markets

Courtney Dyer
O'Melveny & Myers LLP



Remedies for Competition Problems in Data Markets: Taking Competition Law Seriously in an Era of Platform Power

Frank Pasquale

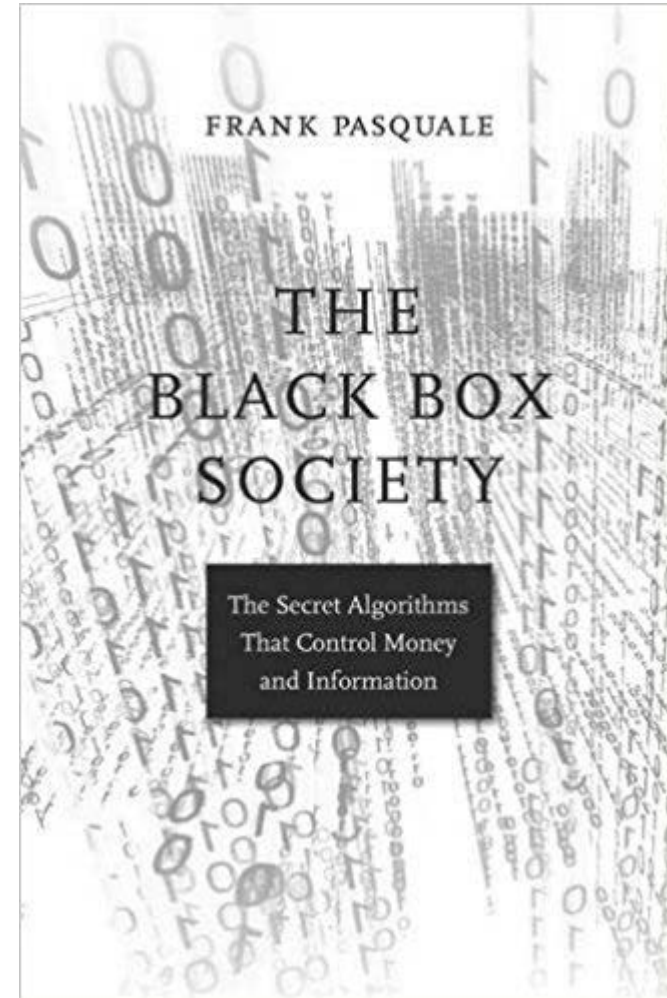
University of Maryland

Francis King Carey School of Law



All Options Are Relevant

- Data interoperability
- Portability
- Licensing
- Divestiture
- Behavioral remedies
- Regulation
- Fines
 - Some portion should also be earmarked for future monitoring and enforcement.
 - Model discussed in Chapters 3 and 5 of my book *The Black Box Society*.



Cabining Platform Power

- Jeffersonian tech policy
 - Frank Pasquale, *Tech Platforms & the Knowledge Problem* (2018)
- Hamiltonian tech policy
 - K. Sabeel Rahman, *The New Utilities* (2018)
 - “1) [F]irewalling core necessities away from behaviors and practices that might contaminate the basic provision of these goods and services—including through structural limits on the corporate organization and form of firms that provide infrastructural goods;
 - 2) [I]mposing public obligations on infrastructural firms, whether negative obligations to prevent discrimination or unfair disparities in prices, or positive obligations to pro-actively provide equal, affordable, and accessible services to under-served constituencies; and
 - 3) [C]reating public options, state-chartered, cheaper, basic versions of these services that would offer an alternative to exploitative private control in markets otherwise immune to competitive pressures.”
 - Adam Candebub, *Behavioral Economics, Internet Search, and Antitrust* (2014)



Lessons from Abroad: Google Search (Shopping) Decision (EC)

- The EC released its decision in June 2017, fining Google € 2.42 billion.
 - “Google commits an abuse in the relevant markets for general search services in the EEA by positioning and displaying more favourably, in its general search results pages, its own comparison shopping service compared to competing comparison shopping services.”



European Commission and Google Android

- In July 2018, the EC fined Google €4.34 billion.
 - The EC stated “[s]ince 2011, Google has imposed illegal restrictions on Android device manufacturers and mobile network operators to cement its dominant position in general internet search.”
 - Case AT.40099



Other Competition Actions by the European Commission & EU Member States

- European Commission and Google Android, Case AT.40099
- The EC found Google:
 - “has required manufacturers to pre-install the Google Search app and browser app (Chrome), as a condition for licensing Google's app store (the Play Store)”
 - “made payments to certain large manufacturers and mobile network operators on condition that they exclusively pre-installed the Google Search app on their devices”
 - “has prevented manufacturers wishing to pre-install Google apps from selling even a single smart mobile device running on alternative versions of Android that were not approved by Google.”



Other Competition Actions by the European Commission & EU Member States

- European Commission and Google Android, Case AT.40099
 - Announcing the EC's decision, Commissioner for Competition, Margrethe Vestager, stated: "Our case is about three types of restrictions that Google has imposed on Android device manufacturers and network operators to ensure that traffic on Android devices goes to the Google search engine. In this way, Google has used Android as a vehicle to cement the dominance of its search engine. These practices have denied rivals the chance to innovate and compete on the merits. They have denied European consumers the benefits of effective competition in the important mobile sphere. This is illegal under EU antitrust rules."



Other Competition Actions by the European Commission & EU Member States

- Germany and Facebook
 - In December 2017, the Bundeskartellamt, Germany’s competition authority “informed . . . Facebook in writing of its preliminary legal assessment in the abuse of dominance proceedings which the authority is conducting against Facebook.”
 - In early October 2018, Andreas Mundt, the competition authority’s president stated: “We are currently evaluating Facebook’s opinion on our preliminary assessment and I’m very optimistic that we are going to take further steps, even this year, whatever this would be.”



Other Competition Actions by the European Commission & EU Member States

- Germany and Facebook
 - “Social networks are data-driven products. Where access to the personal data of users is essential for the market position of a company, the question of how that company handles the personal data of its users is no longer only relevant for data protection authorities. It becomes a relevant question for the competition authorities, too.”



Other Competition Actions by the European Commission & EU Member States

- Germany and Facebook
 - “The competition authority is responsible for monitoring the market activities of dominant companies. In the digital economy, the collection and processing of data is an entrepreneurial activity that has great relevance for the competitive performance of a company. The legislator has acknowledged this relevance and in § 18(3a) of the German Competition Act made access to personal data a criterion for market power, especially in the case of online platforms and networks.”
 - Section 18(3a) and other amendments to the German Competition Act went into effect in June 2017.



Other Competition Actions by the European Commission & EU Member States

- Germany – Modernizing Competition Law
 - Modernizing competition law is part of the ruling coalition’s Coalition Agreement, released in early 2018
 - The German Ministry for Economic Affairs organized the Commission Competition Law 4.0 in September 2018 with the goal of “proposing reforms to competition law to better support digital companies based in Europe.”
 - Commission recommendations are due by fall 2019



Other Competition Actions by the European Commission & EU Member States

- Italy and Facebook
 - In April 2018, the Italian Competition Authority “launched investigations against Facebook Inc. over alleged unfair commercial practices . . . in violation of the Articles. 20, 21, 22, 24 and 25, of the [Italian] Consumer Code.”
 - The unfair commercial practices involve Facebook’s collection and use of user data.



Other Competition Actions by the European Commission & EU Member States

- Italy and Facebook
 - Giovannie Pitruzella, Chairman of the Italian Competition Authority, in introducing the Authority's 2017 Annual Report, spoke about competition law and big tech firms:
 - “[W]e have the issue of the immense market power of the web giants – such as Google, Amazon, Facebook and Apple – and the emergence of new monopolies. These are fed by a combination of network effects, economies of scale, lock-in practices, and the big data economy. Here the powers of, primarily, the European Commission enter into play, in view of the extent and scope of the phenomena under consideration (we need only think, for example, of the fine recently imposed on Google). There is, however, also space for the national authorities in the context of the European Competition Network (ECN).”



Other Competition Actions by the European Commission & EU Member States

- EU Member States Collaborating – France & Germany
 - In 2016, France’s Autorité de la Concurrence and Germany’s Bundeskartellamt released a joint report, *Competition Law and Data*, analyzing “the implications and challenges for competition authorities resulting from data collection in the digital economy and other industries.”



More Vigorous Enforcement and Serious Remedies are Needed in the U.S.

- “The weakened antitrust laws have given large corporations freedom to dominate markets through mergers, exclusionary conduct, and restrictive trade practices.”
- “The efficiency or consumer welfare goals that have dominated antitrust for the past two generations neither reflect the objectives of Congress nor address the structural problems in today’s economy.”
 - Sandeep Vaheesan, *Resurrecting “A Comprehensive Charter of Economic Liberty”: The Latent Power of the Federal Trade Commission* (2017)



Revitalizing Competition Law

- “The antitrust laws can be interpreted to honor their original legislative intent and create a more just and equitable society.”
- “The FTC has broad power to define the meaning of Section 5”
 - *Chevron* deference
 - FTC Act of 1914, in which Congress “expressly granted the Commission the power to define the meaning of ‘unfair methods of competition.’”
 - Sandeep Vaheesan, *Resurrecting “A Comprehensive Charter of Economic Liberty”: The Latent Power of the Federal Trade Commission* (2017)
 - See also Ganesh Sitaranam, *Taking Antitrust Away from the Courts* (2018).



Taking Market Power Seriously

- “[T]he FTC should establish presumptions of illegality for mergers in concentrated markets, certain types of conduct by firms with market power, and vertical restraints that limit retail competition and challenge durable or otherwise harmful possession of market power.”
 - Sandeep Vaheesan, *Resurrecting “A Comprehensive Charter of Economic Liberty”*: *The Latent Power of the Federal Trade Commission* (2017)



The “Soft Touch” Risks Serious Discordance with Global Standards

- “[T]he FTC’s most newsworthy act on the monopolization front was arguably an inaction. In early 2013, the FTC rejected the recommendation of its legal staff and closed its two-year investigation into Google’s search practices with highly unusual ‘voluntary’ commitments that did not include any binding conditions.”
 - Sandeep Vaheesan, *Accommodating Capital and Policing Labor: Antitrust in the Two Gilded Ages* (2018)



Troubling Legacy Regarding FTC Scraping Finding

- “The FTC, in a highly unorthodox move, closed its investigation in early 2013 after Google promised to stop [scraping].”
- “Then-FTC Chairman Jon Leibowitz and Commissioner Julie Brill, in a [press release](#), expected the FTC ‘to enforce vigorously’ Google’s voluntary commitment not to scrape.”
- “Both have left the FTC. Google reportedly continues to scrape [as of April, 2017].”
 - Ariel Ezrachi and Maurice Stucke, *The E-Scraper and E-Monopsony*



For Further Reading

- Oren Bracha & Frank Pasquale, *Federal Search Commission? Access, Fairness, and Accountability in the Law of Search*, 93 CORNELL L. REV. 1149 (2008).
- Frank Pasquale, *Internet Nondiscrimination Principles: Commercial Ethics for Carriers and Search Engines*, 2008 U. CHI. LEG. F. 263 (2008) (invited piece for symposium *Law in a Networked World*).
- Frank Pasquale, *Beyond Competition and Innovation: The Need for Qualified Transparency in Internet Intermediaries*, 104 Nw. U. L. REV. 105 (2010).
- Frank Pasquale, *Privacy, Antitrust, and Power*, 20 GEO. MASON L. REV. 1009 (2013).
- Frank Pasquale, *Paradoxes of Digital Antitrust*, HARV. J. L. & TECH. (2013).
- Adam Candeub, Behavioral Economics, Internet Search, and Antitrust, 9 I/S: J.L. & Pol'y for Info. Soc'y 407 (2014).
- Frank Pasquale, *New Economic Analysis of Law: Beyond Technocracy and Market Design*, CRITICAL ANALYSIS OF LAW (Special Issue on New Economic Analysis of Law) (2018) (commenting on Rahman, Ezrachi, and Stucke).
- Ben Thompson, *Why Facebook Shouldn't Be Allowed to Buy tbn*, Stratechery, at <https://stratechery.com/2017/why-facebook-shouldnt-be-allowed-to-buy-tbn/>.



Remedies for Competition Problems in Data Markets

Kevin Bankston

New America

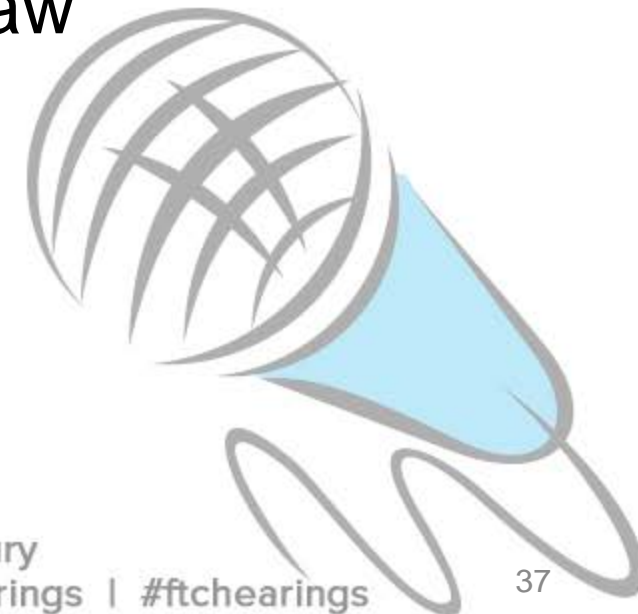
Open Technology Institute



Remedies for Competition Problems in Data Markets

D. Daniel Sokol

University of Florida Levin College of Law



Conduct cases

- No conduct cases decided involving Big Data that lead to anti-competitive harm
- *Authenticom, Inc. v. CDK Global, LLC* (Seventh Circuit 2017)
 - Authenticom brought suit regarding access to third party data when CDK switched from an open system to closed system for data (moving from allowing access to third parties to blocking such access)
 - Seventh Circuit reversed the preliminary injunction and held that the forced sharing remedy went beyond the scope of alleged antitrust violation. The Seventh Circuit court noted that “Such an order is inconsistent with *Trinko*, which cautioned that an order to continue to do business with a firm is proper only if the case fits “within the limited exception recognized in *Aspen Skiing*.””
 - No such obligation in this case with regard to Big Data.



Data related mergers

- No deal has been blocked because of data competition concerns
 - Apple/Shazam
 - Facebook/WhatsApp
 - Amazon/Wholefoods
 - Google/DoubleClick
 - Microsoft/Linkedin
- Data is not used nearly as effectively as the alarmists would have us believe



Implications

Framework Generally Robust

- Entry barriers and data

Challenges of Antitrust

- Platform competition and two-sided or multi-sided markets
 - Market definition
 - Effects
- Essential Facilities and Refusals to Deal



Old cases of refusals to deal

- *United States v. Terminal Railroad Ass'n of St. Louis*, 224 U.S. 383 (1912)
- *Associated Press v. United States*, 326 U.S. 1 (1945)
- *Lorain Journal Co. v. United States*, 342 U.S. 143 (1951)
- *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973)
- *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985)
- Essential facilities best articulated in lower court in a regulated industry context
 - *MCI Communications v. AT&T Co.*, 708 F.2d 1081, (7th Cir. 1983)
 - “(1) control of the essential facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility to competitors.”



Modern History

- *Trinko* (2004) suggests essential facilities is almost dead in the United States
 - “We have never recognized such a doctrine.”
- *Trinko* suggests duties to deal also limited and *Aspen* at periphery of Section 2 (perhaps need a preexisting duty)
 - “*Aspen Skiing* is at or near the outer boundary of §2 liability.”
 - “Finally, we do not believe that traditional antitrust principles justify adding the present case to the few existing exceptions from the proposition that there is no duty to aid competitors. ”
- *linkLine* (2009) also hostile and reiterates *Trinko*’s caution
- Leading US treatise is deeply hostile:
 - “the ‘essential facility’ doctrine is both harmful and unnecessary and should be abandoned.” Areeda & Hovenkamp § 7.07c (4th ed. 2012)



What do you need for an essential facilities claim?

- Asset is a bottleneck to creating a new product or connecting two existing products
- Classic case:
 - Asset is infrastructure such as bridges, highways, and power grids (often state owned or state authorized)
 - Asset is the only gateway available (and creating an alternative connection is economically prohibitive)



Problem of essential facilities doctrine in tech contexts

- Doctrine creates uncertainty and threatens returns on investment
- Yet, new attempts to make these claims in high tech sectors with Big Data



Conclusion

- Is there even a problem
- If there is – is the remedy appropriate in the data context
- Lessons of past in structuring workable remedies

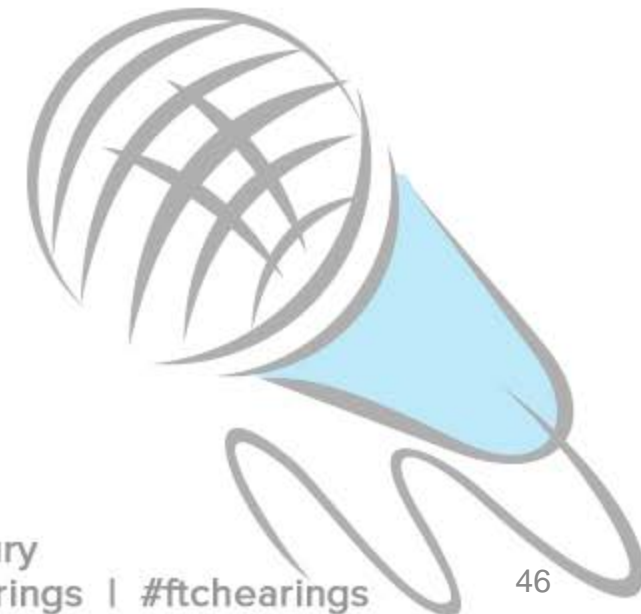


Remedies for Competition Problems in Data Markets

Panel Discussion:

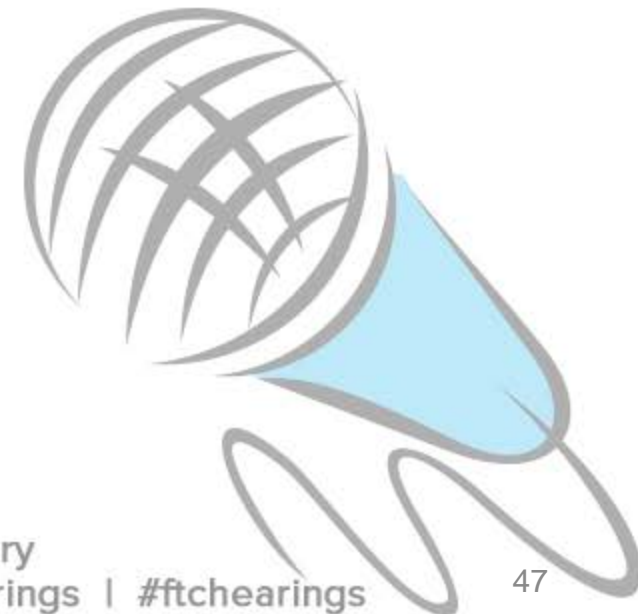
Andrew I. Gavil, Courtney Dyer,
Frank Pasquale, Kevin Bankston,
D. Daniel Sokol

Moderator: Katie Ambrogi



Lunch Break

12:00-12:45 pm



Economics of Online Advertising

Garrett Johnson
Boston University
Questrom School of Business



Advertising Expenditures by Media

Digital overtook TV in 2017

US Total Media Ad Spending Share, by Media, 2014-2020

% of total

	2014	2015	2016	2017	2018	2019	2020
TV*	39.1%	37.7%	36.8%	35.8%	34.8%	33.7%	32.9%
Digital	28.3%	32.6%	35.8%	38.4%	40.8%	43.1%	44.9%
—Mobile	10.9%	17.3%	22.7%	26.2%	28.8%	31.0%	32.9%
Print	17.4%	15.4%	13.9%	12.9%	12.2%	11.6%	11.1%
—Newspapers**	9.1%	8.0%	7.2%	6.6%	6.1%	5.7%	5.5%
—Magazines**	8.3%	7.4%	6.8%	6.4%	6.1%	5.8%	5.6%
Radio***	8.4%	7.8%	7.4%	7.0%	6.7%	6.4%	6.1%
Out-of-home	4.0%	4.0%	3.9%	3.8%	3.7%	3.5%	3.4%
Directories**	2.8%	2.5%	2.2%	2.0%	1.9%	1.7%	1.6%

Note: *excludes digital; **print only, excludes digital; ***excludes off-air radio & digital

Source: eMarketer, March 2016

205439

www.eMarketer.com



Online Ad Spending by Format

US Digital Ad Spending, by Device and Format, 2015-2020

billions

	2015	2016	2017	2018	2019	2020
Mobile*	\$31.69	\$45.95	\$57.44	\$68.93	\$77.89	\$86.84
Display	\$16.18	\$23.60	\$29.62	\$35.47	\$40.08	\$44.68
—Banners, rich media, sponsorships and other**	\$13.29	\$19.14	\$23.75	\$28.36	\$31.98	\$35.61
—Video	\$2.89	\$4.47	\$5.87	\$7.11	\$8.11	\$9.08
Search	\$14.17	\$20.28	\$25.06	\$29.87	\$33.60	\$37.43
SMS/MMS/P2P messaging	\$0.27	\$0.29	\$0.29	\$0.29	\$0.28	\$0.28
Other (classifieds and directories, email and lead generation)	\$1.06	\$1.78	\$2.47	\$3.30	\$3.93	\$4.45
Desktop***	\$28.13	\$26.14	\$25.42	\$24.25	\$25.50	\$26.34
Search	\$14.67	\$13.00	\$12.38	\$12.31	\$13.27	\$13.94
Display	\$10.73	\$10.96	\$11.24	\$10.72	\$11.43	\$11.95
—Video	\$4.79	\$5.84	\$6.68	\$7.29	\$8.18	\$8.88
—Banners, rich media, sponsorships and other**	\$5.94	\$5.12	\$4.55	\$3.43	\$3.25	\$3.08
Other (classifieds and directories, email and lead generation)	\$2.73	\$2.18	\$1.81	\$1.22	\$0.81	\$0.45
Total	\$59.82	\$72.09	\$82.86	\$93.18	\$103.39	\$113.18

Note: *includes ad spending on tablets; **includes ads such as Facebook's News Feed Ads and Twitter's Promoted Tweets; ***includes spending primarily on desktop-based ads
Source: eMarketer, Sep 2016

215874

www.eMarketer.com

In 2018:

- Mobile (74%) vs. Desktop (26%)
- Display (52%) vs. Search (48%)
 - Display overtook search in 2017
- Video is 32% of display

Some economic benefits of online ads

- Subsidizes publishers content & online services
 - Ad blocking associated with reduction in content and traffic (Shiller, Waldfoegel, & Ryan 2018)
- Ads inform consumers & reduce their search costs
- Further advertiser goals: sales, donations, votes, etc.
- Adtech is a high-growth, dynamic economic sector
 - US adtech firms dominant globally



Lower cost of targeting

- Targeting costs distinguish digital ads (Goldfarb 2013)
- Search: Queries indicate intent, facilitates consumer-firm matches via paid or organic channel
- Display ads:
 - Contextual targeting (Ada, Nabout, & Feit 2018)
 - Behavioural targeting including retargeting (Neumann, Tucker, & Whitfield 2018; Johnson, Nubbemeyer, Lewis 2017; Sahni, Narayan, & Kalyanam 2017)
 - Database match (Lewis, & Reiley 2014; Johnson, Lewis, & Reiley 2017)
- Mobile: Location targeting (Dubé, Fang, Fong Luo 2017; Chen, Li, & Sun 2017)



Theory literature on targeting

- Improved targeting can soften competition (Chen, Narasimhan, & Zhang, 2001; Gal-Or & Gal-Or, 2005; Chen, Li, & Sun 2017)
- Targeting creates thin vs. thick market revenue trade-off for ad sellers (Levin & Milgrom 2010; Hummel & McAfee 2015)
- Ad nuisance and ad avoidance externalities create inefficiencies (Johnson, J. 2013; Anderson & Gans 2011)
- Online ads competes with offline advertising in part through better targeting (Athey & Gans, 2010; Bergemann & Bonatti, 2011; Athey, Calvano, & Gans, 2015)



Improved measurement

- Data: Connecting ads, users, actions at user-level
- Outcomes: Clicks, conversions
 - Enables in-campaign optimization by proxy metric, not ROI (Edelman 2014; Johnson & Lewis 2015)
- Flourishing of ad effectiveness experiments*:
 - *Search*: Kalyanam, McAteer et al. 2015; Sahni 2015, 2016; Sahni & Nair 2016; Dai & Luca 2016; Simonov, Nosko, & Rao 2018; Simonov & Hill 2018
 - *Display*: Lewis 2010; Goldfarb & Tucker 2011; Bart, Stephen, & Sarvary 2014; Lewis & Nguyen 2015; Johnson, Lewis & Nubbemeyer 2017b; Gordon, Zettelmeyer et al. 2018

*Some examples of large, multi-advertiser experiments



3 important lessons from display ad effectiveness experiments

1. Importance of experimentation for measurement (Gordon, Zettelmeyer, Bhargava, & Chapsky 2018)
2. Low-cost, scalable experimentation now possible (Johnson, Lewis, & Nubbemeyer 2017)
3. Precise ad campaign measurement can requires millions of users (Lewis & Rao 2015)

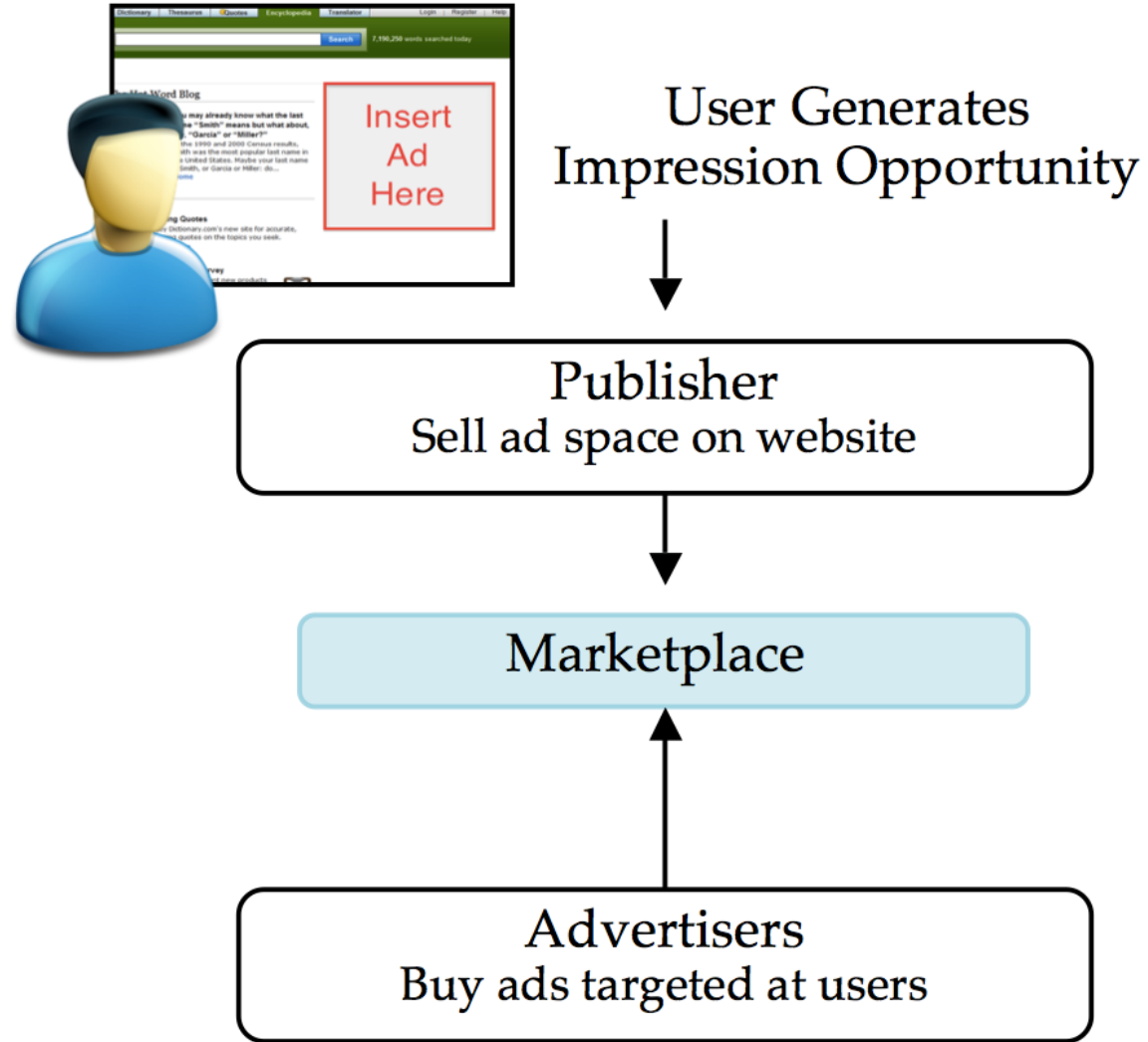
→ Measurement challenges affect functioning of ad markets



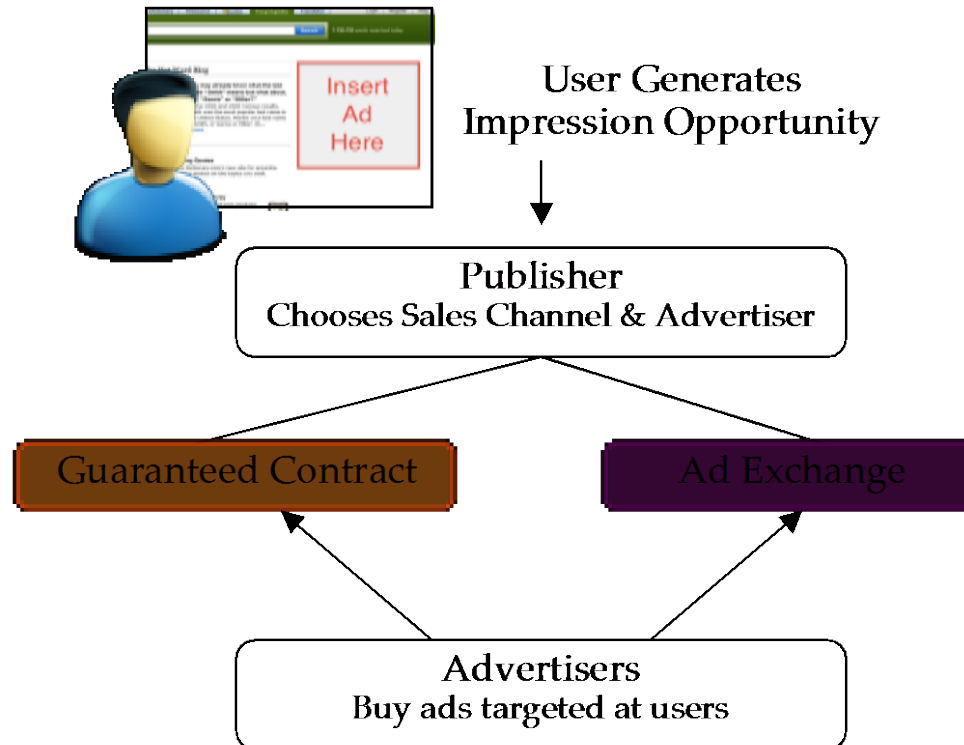
Auctions widely used for online ads

- Ad markets facilitated by widespread use of auctions
 - Facilitate price discovery
 - Scalable
- Auction formats studied by Varian 2007; Edelman, Ostrovsky, & Schwarz 2007; Levin & Milgrom 2010; Athey & Ellison 2011; Zhu & Wilbur 2011; Celis, Lewis et al. 2014; Arnosti, Beck, & Milgrom 2016; Zeithammer 2017
 - In search, advertiser bids are weighed by their quality score to balance interests of consumers, advertisers, & ad platform
- Automation/Programmatic advertising reduces transaction costs





For most publishers, Display ads are sold in one of two ways



1) *Guaranteed Contract*

Bulk ad purchase that specifies the price and quantity, as well as the time frame and targeting criteria

2) *Ad Exchange*

A platform running an auction to determine which advertiser buys an individual impression in real time (<0.1 seconds)

Programmatic trend: US display ads in 2018*

- 82.5% of transacted programmatically
 - Advertisers buy ads using computer-to-computer automated transactions (rather than through a salesperson)
 - 65% of programmatic is mobile
 - Vs. <10% of TV spending is programmatic
- 42% on open (\$10.7B) or private (\$9.2B) exchanges
 - Auction houses where ad impressions sold in <0.1 sec
 - Also known as real-time bidding (RTB)
 - See Choi, Mela, & Balseiro (2017) for a literature survey
- 58% on programmatic guaranteed:
 - Guaranteed contract where the transaction is automated

Figures source: eMarketer



Market & market power issues

- Market definition: E.g. Online vs. offline substitutability (Goldfarb & Tucker 2011)
- Multi-sided platforms
 - Consumers receive free content & services (e.g. search, e-mail, maps)
- Some countervailing power from intermediaries on buyer side (Muthukrishnan 2009; Hummel, McAfee, & Vassilvitskii 2015; Decarolis & Rovigatti 2017)
- Lack of transparency, fraud (ANA report 2016)

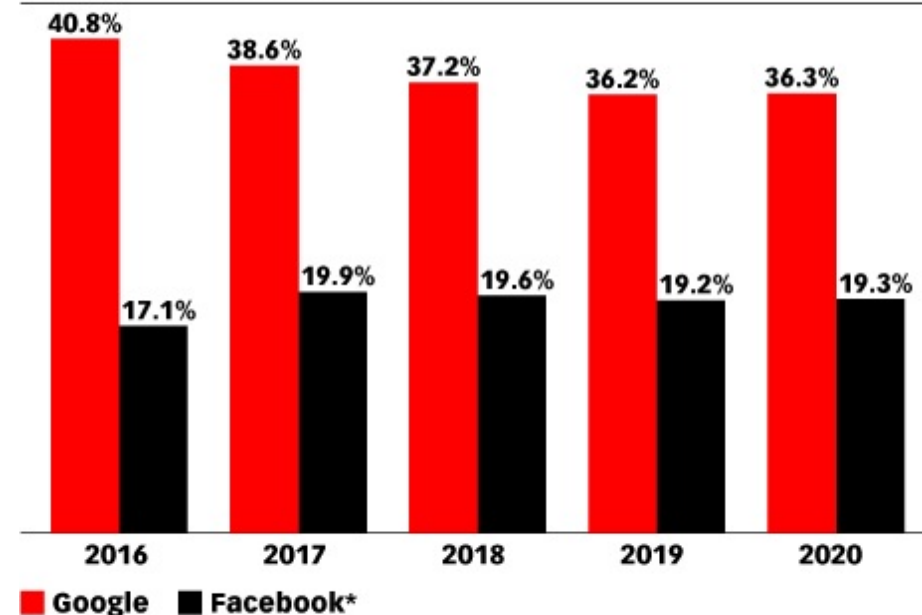


Top 2 firms represent 56.8% of online ad spending

- **Google**
 - Overall: 37.2%
 - Display: 12.5%*
- **Facebook**
 - Overall: 19.6%
 - Display: 39.1%*
- Market dominance arises from targeting & measurement capabilities, network externalities
- Amazon & AT&T (AppNexus acquisition) are two powerful new entrants

Facebook* vs. Google Share of Total US Digital Ad Spending, 2016-2020

% of total digital ad spending



*Note: includes advertising that appears on desktop and laptop computers as well as mobile phones, tablets and other internet-connected devices, and includes all the various formats of advertising on those platforms; net ad revenues after companies pay traffic acquisition costs (TAC) to partner sites; *includes Instagram ad revenues*

Source: eMarketer, March 2018

235954

www.eMarketer.com

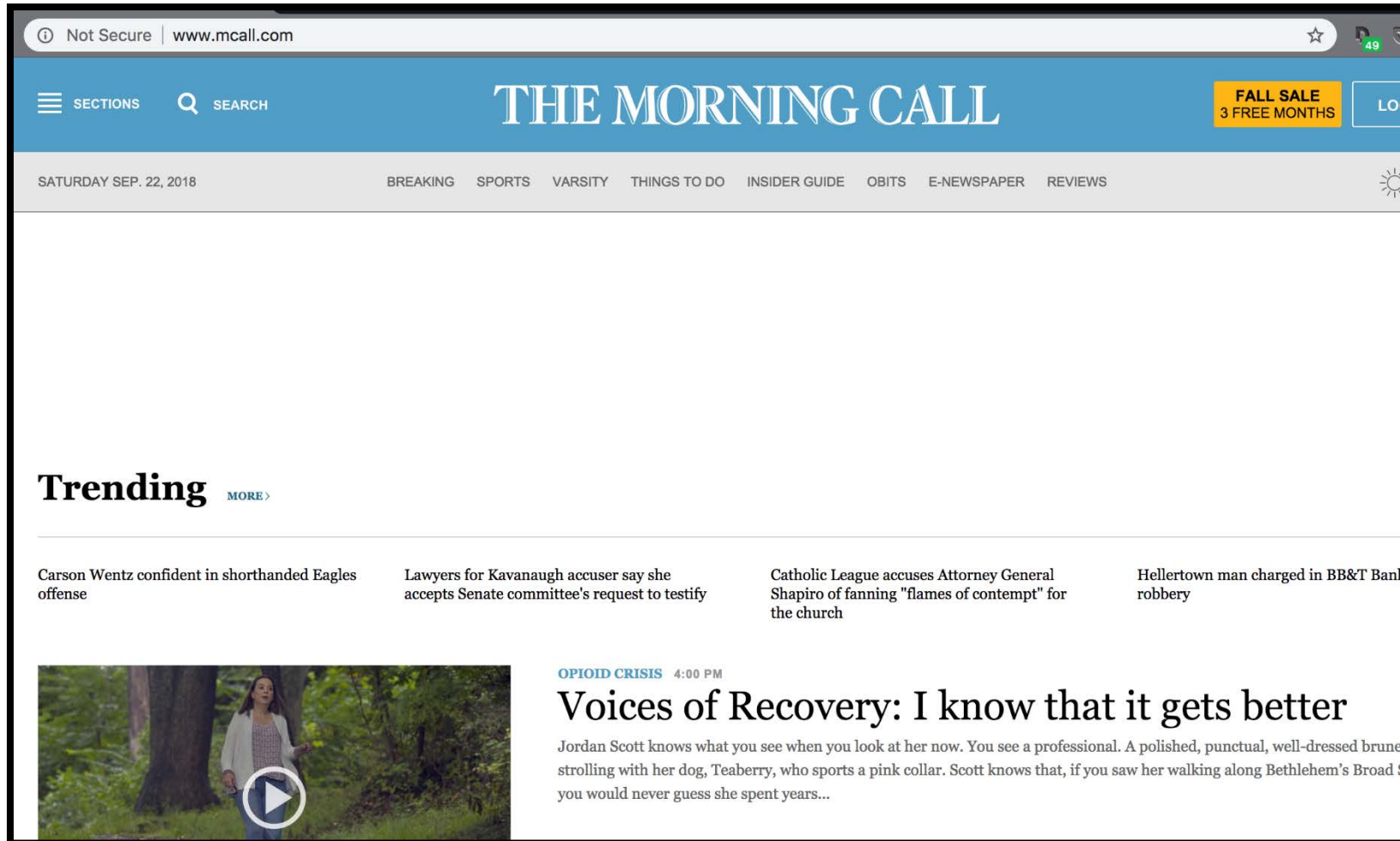
*2017 figures from eMarketer

Consumer protection issues

- *Privacy* (Tucker 2012)
- Ad disclosure in native advertising (Nair & Sahni 2016)
- Equity in ad targeting (Lambrecht, & Tucker 2016)



Tracking widespread*



The screenshot shows the homepage of 'THE MORNING CALL' website. The browser address bar displays 'www.mcall.com' and 'Not Secure'. The website header includes a navigation menu with 'SECTIONS' and 'SEARCH', the site title 'THE MORNING CALL', and a 'FALL SALE 3 FREE MONTHS' promotion. Below the header, the date 'SATURDAY SEP. 22, 2018' and various category links like 'BREAKING', 'SPORTS', and 'VARSITY' are visible. The main content area features a 'Trending' section with four news snippets: 'Carson Wentz confident in shorthanded Eagles offense', 'Lawyers for Kavanaugh accuser say she accepts Senate committee's request to testify', 'Catholic League accuses Attorney General Shapiro of fanning "flames of contempt" for the church', and 'Hellertown man charged in BB&T Bank robbery'. Below these is a video player with a play button icon, showing a woman in a forest. The video title is 'Voices of Recovery: I know that it gets better' and it is categorized as 'OPIOID CRISIS' with a duration of '4:00 PM'. The video description reads: 'Jordan Scott knows what you see when you look at her now. You see a professional. A polished, punctual, well-dressed brunett strolling with her dog, Teaberry, who sports a pink collar. Scott knows that, if you saw her walking along Bethlehem's Broad St you would never guess she spent years...'

*Top 100 US sites installed 49 cookies on average (Hoofnagle et al. 2012)

Tracking widespread*

The screenshot displays a website interface with a blue header containing a search bar and navigation links. Below the header is a large advertisement for Portugal, featuring a golf course and the text "WORLD'S BEST DESTINATION". To the right of the advertisement is a sidebar titled "DISCONNECT" with a network icon. The sidebar contains information about tracking sites, including "bluekai.com" and "mcall.com", and offers options to "Block tracking sites", "Hide sidebar", and "Show instructions". To the right of the sidebar is a large network diagram with a central node labeled "M" and numerous peripheral nodes connected by lines, representing a complex web of tracking relationships. A "Show list view" button is located in the top right corner of the network diagram area.

*Top 100 US sites installed 49 cookies on average (Hoofnagle et al. 2012)

Regulatory environment ... in the United States

- Currently, no regulation except honest practices
 - Multiple FTC enforcements for violating own privacy policy
 - Turn example: DSP tracked users who tried to block tracking
- US regulators have favored *opt-out* policy that allows privacy-concerned users to stop OBA & tracking (e.g. White House 2012; FTC 2012)
- To pre-empt regulation, industry self-regulated by offering its own opt-out



How does the AdChoices self-regulatory notice & opt-out choice mechanism work?



- >trillion AdChoices ads delivered/month globally
- Visit <http://youradchoices.com/> to learn & opt-out

What do users actually say about online behavioral advertising (OBA)?

- Over 2/3 of Americans oppose OBA[†]
- Eliciting privacy preferences is challenging
 - Surveys vulnerable to framing
 - People have a hard time quantifying the value of privacy
 - Privacy is context-dependent: e.g. familiarity with publisher and privacy habituation

[†]Turow et al. 2009; McDonald and Cranor, 2010; Morales, 2010; Pubmatic, 2011



What do users actually do about online behavioral advertising (OBA)?

- Opt-outs represent only 0.23% of US impressions (Johnson, Shriver & Du 2017)
- Privacy paradox: Gap between stated preferences & choice
 - Sensitive to small costs/benefits (Athey et al. 2017)
 - Social media privacy settings: Few (1.2%) alter permissive defaults (Gross & Acquisti 2005)
 - Apps for privacy: Revealed (Kummer & Schulte 2016) vs. stated preference (Savage & Waldman 2014)
 - Willingness-to-pay vs. Willingness-to-accept gap: Acquisti, Acquisti, John, & Loewenstein (2013); McDonald & Cranor (2010a)



Value of a cookie

-65%

- Goldfarb & Tucker (2011): Survey measures of ad effectiveness fell post-EU tracking crackdown
- Beales & Eisenach (2014): Cookieless impressions fetch 76% and 50% lower prices on two ad exchanges

-50%

- Johnson, Shriver, Du (2018): lower price for opt-out impressions vs. cookie counterfactual

-
- Behavioral targeting improves targeting and creates value for advertisers as well as publishers: Johnson (2013); Budak, Ceren, Goel, Rao & Zervas (2016); Rafieian & Yoganarasimhan (2016); Miller & Skiera (2017)



Privacy as competition policy

- Anti-competitive
 - Difficulty of getting consent (Campbell, Goldfarb, & Tucker 2015)
 - Larger firms have greater compliance resources
- Pro-competitive
 - Large companies endure more consumer & regulator scrutiny
 - Safety in the herd



Further reading

- Tucker (2012) “The economics of advertising and privacy” *International Journal of Industrial Organization*
- Goldfarb (2013) “What is different about online advertising?” *Review of Industrial Organization*
- Goldfarb & Tucker (2017) “Digital economics” *NBER Working Paper Series*
- AdExchanger e-newsletter



Competition and Consumer Protection Issues in Online Advertising

Session moderated by:

James Cooper

Federal Trade Commission
Bureau of Consumer Protection



Competition and Consumer Protection Issues in Online Advertising

Anja Lambrecht

London School of Business



What advertising used to be



Advertising is now more granular

ME+EM

[NEW IN](#) [COLLECTION](#) [BLOG](#) [SALE](#)



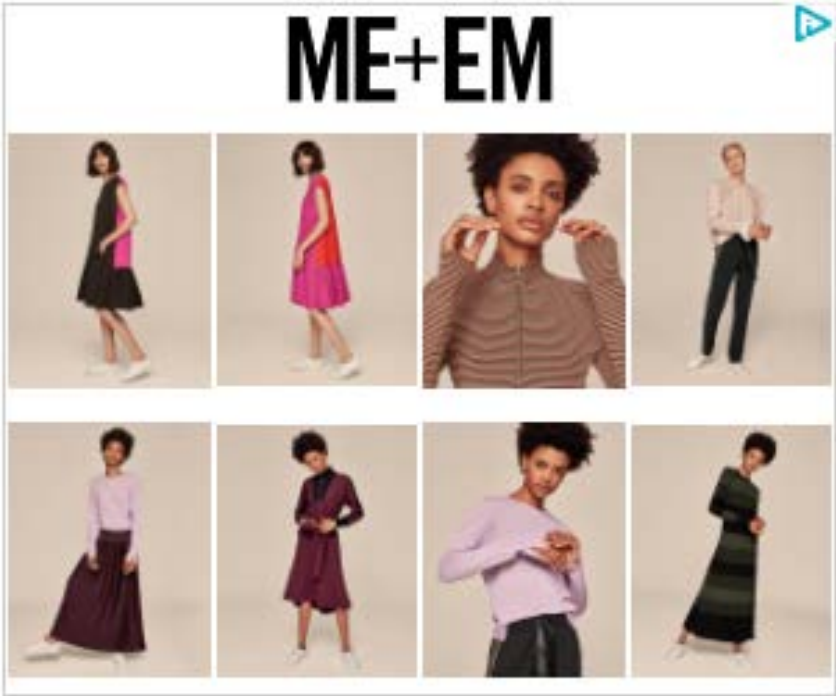
COLOUR B
Ponte Jersey

8

SIZE NO
A

PROD

The Fit
+ Oversized swing shape
+ Designed to be worn oversized
+ Model is a size 8, wearing a s



Data can make online advertising more relevant and effective....

ANJA LAMBRECHT and CATHERINE TUCKER*

When Does Retargeting Work? Information Specificity in Online Advertising

Journal of Marketing Research
Vol. L (October 2013), 561–576

- But only if data analysis is sufficiently granular and mirrors consumers' preferences and decision process
- Not easy to get right



Advertising supports access to free content and services



<http://pubsonline.informs.org/journal/mnsc/>

MANAGEMENT SCIENCE

Vol. 63, No. 4, April 2017, pp. 1150–1165
ISSN 0025-1909 (print), ISSN 1526-5501 (online)

Fee or Free: When Should Firms Charge for Online Content?

Anja Lambrecht,^a Kanishka Misra^b

^aLondon Business School, London NW1 4SA, United Kingdom; ^bRoss School of Business, University of Michigan, Ann Arbor, Michigan 48109

Contact: alambrecht@london.edu (AL); kamisra@ucsd.edu (KM)

Received: June 3, 2015

Revised: August 15, 2015

Accepted: September 26, 2015

Published Online in Articles in Advance:
April 25, 2016

<https://doi.org/10.1287/mnsc.2015.2383>

Copyright: © 2016 INFORMS

Abstract. Many online content providers aim to compensate for a loss in advertising revenues by charging consumers for access to content. However, such a choice is not straightforward because subscription fees typically deter customers, and a resulting decline in viewership further reduces advertising revenues. This research examines whether firms that offer both free and paid content can benefit from adjusting the amount of content offered for free. We find that firms should offer more free—and not paid—content in periods of high demand. We motivate theoretically that this policy, which we term “countercyclical offering,” may be optimal for firms when consumers are heterogeneous in their valuation of online content and this heterogeneity varies over time. Using unique data from an online content provider, we then provide empirical evidence that firms indeed engage in countercyclical offering and increase the share of free content in periods of high demand.

Spillover Effects and Freemium Strategy in Mobile App

Market

Yiting Deng

Anja Lambrecht

Yongdong Liu*

Working Paper

October 15, 2018

Policy issues

- Data-driven online advertising can make ads more relevant to consumers and allow firms to enter the market by offering free services – more targeted ads may lead to higher ad prices and revenues
- Data-driven advertising raises privacy concerns – tracking, storage and sharing of data is opaque and not controlled by user ... but control would be effortful
- Getting the balance right is the key issue – especially since many consumers access a substantial amount of services in the free(mium) economy



Competition and Consumer Protection Issues in Online Advertising

Leigh Freund
Network Advertising Initiative



Competition and Consumer Protection Issues in Online Advertising

Allie Bohm

Public Knowledge



Competition and Consumer Protection Issues in Online Advertising: The Online Advertising Marketplace

Howard Beales

George Washington University
School of Business



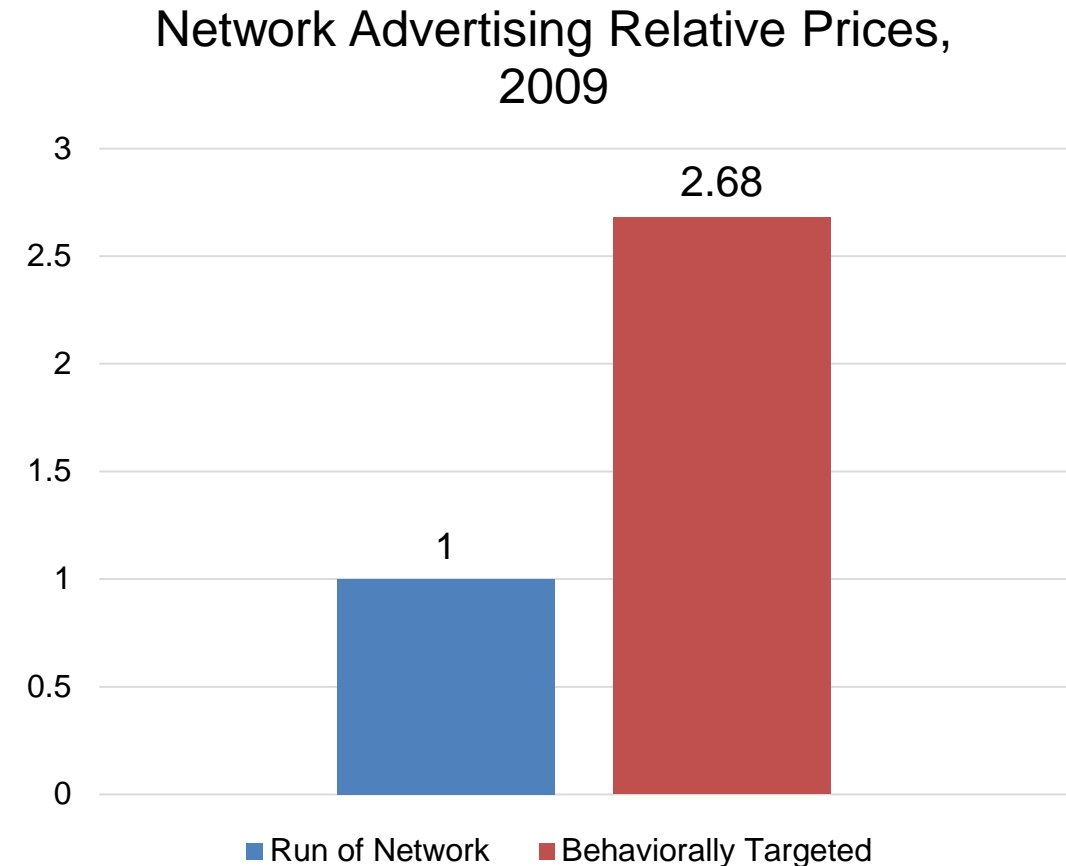
Internet Content is a Public Good

- Content is not “used up”
- Essentially free to add another viewer
- Any fair view of the history of publishing in any media would indicate that advertiser support is a critical element in the market provision of public goods
 - Mixed models are common, but pure subscription models have always had a limited role.
- There is no reason to think financing for internet content will follow a fundamentally different model



Information Adds Value to Online Advertising

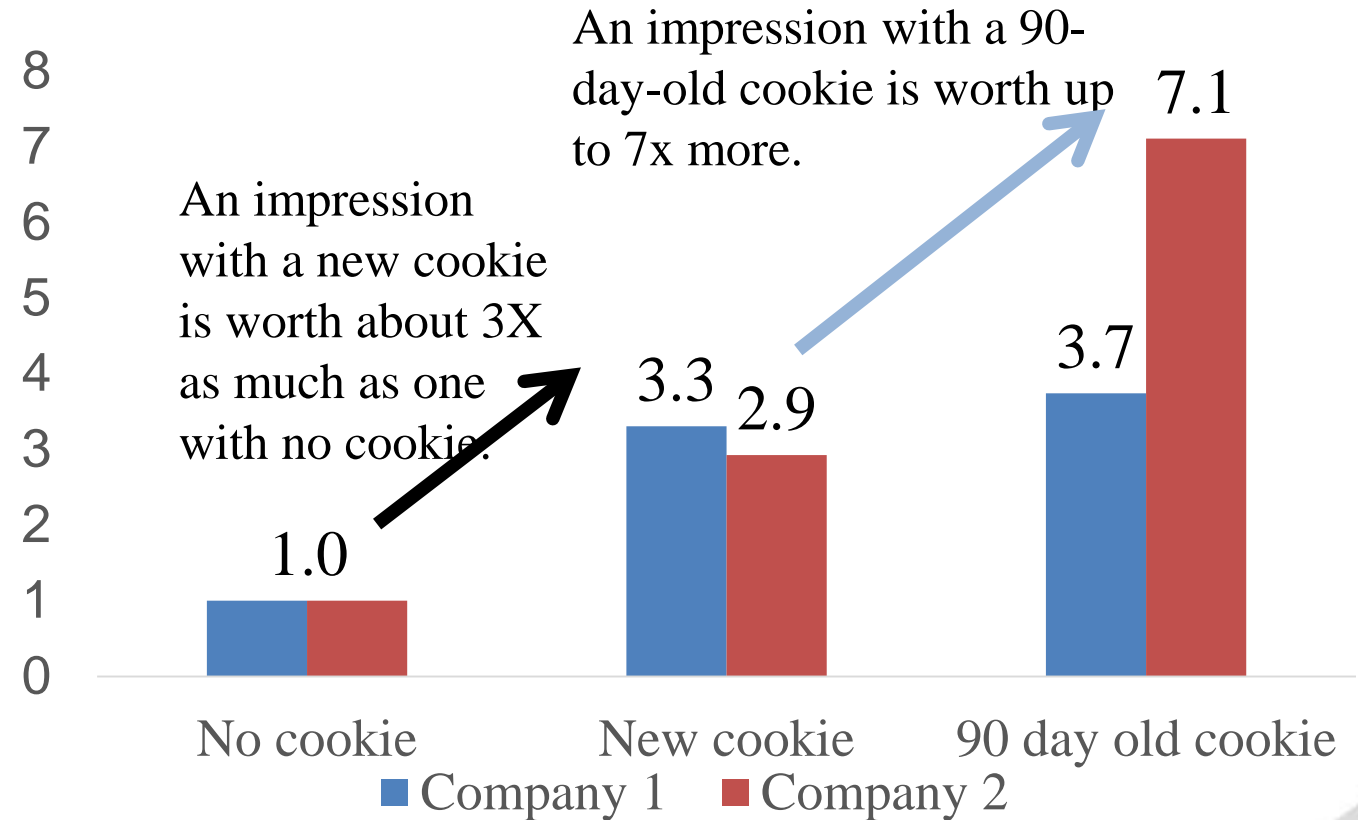
- 2009 survey of 12 major ad networks, roughly 40% of display advertising market
- Average CPM for the calendar year for different advertising categories



Source: Howard Beales, The Value of Behavioral Targeting, 2010, sponsored by Network Advertising Initiative

Information Adds Value to Online Advertising

- 2013 analysis of auction prices on two ad exchanges
- Relative prices are substantially higher when information is available

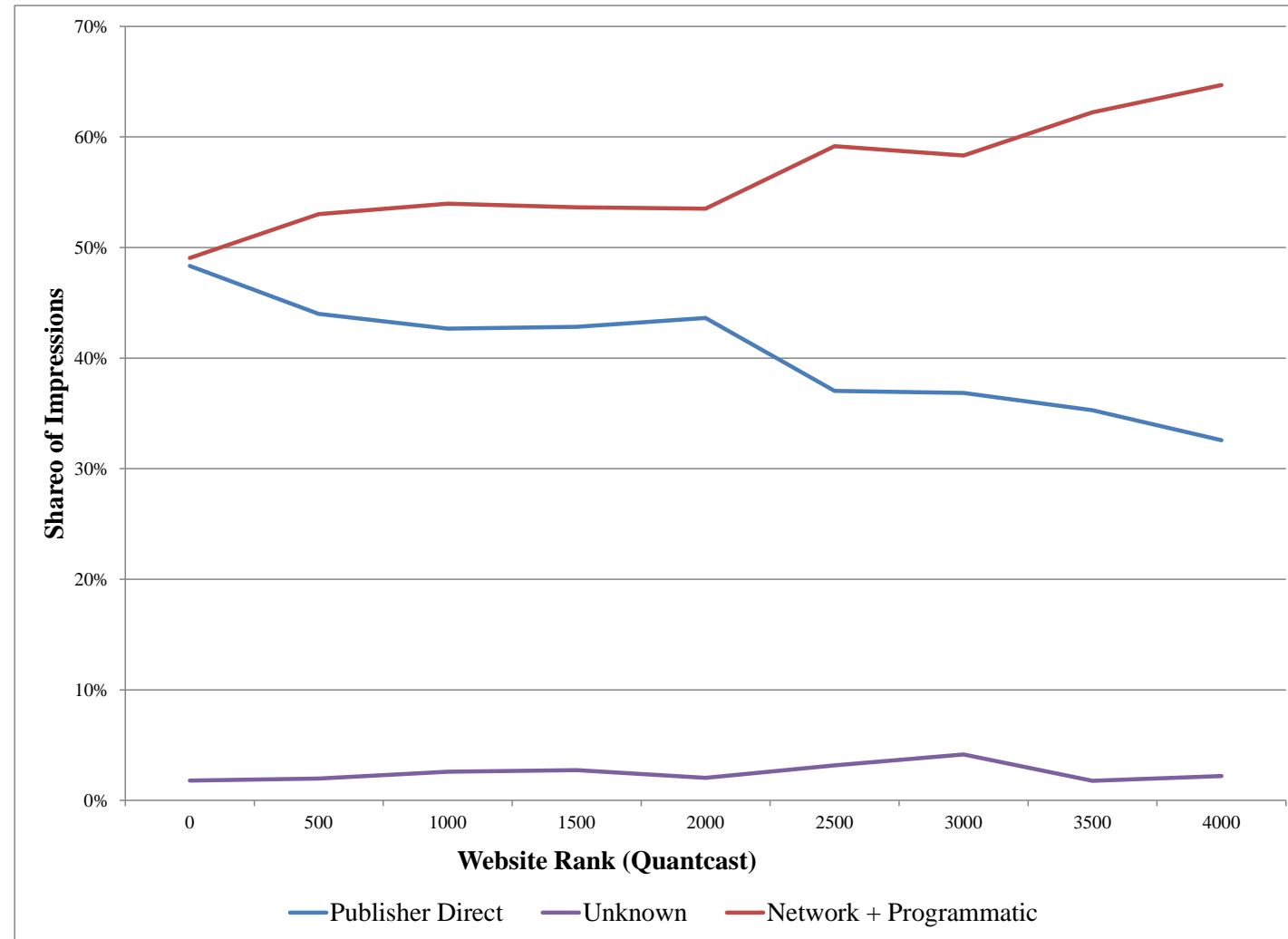


Source: Howard Beales & Jeffrey Eisenach, "An Econometric Analysis of the Value of Information Sharing in the Market for Online Content" (SSRN ID 2421405), sponsored by Digital Advertising Alliance

Smaller Publishers Depend More on Third Party Advertising Sales

- Data from Adomic, 8/13-11/13
- Even largest publishers sell majority of advertising through third parties
- Smaller publishers sell 2/3 of advertising through third parties

Source: Beales and Eisenach



Many Players in the Digital Advertising Marketplace are Unknown to Consumers

- The first four companies on the membership list of the NAI:
 - 33across, Accuen, Acuity, Adara
 - Consumers have never heard of them
- These intermediaries are important sources of competition in an online advertising market dominated by Google and Facebook
- More elaborate consent requirements for information usage will likely selectively disadvantage these behind-the-scenes competitors



Advertising Enhances Product Market Performance

- Numerous studies find removing restrictions on advertising has pro-competitive effects
 - Lower Prices
 - Product Improvements
 - Narrower differences between demographic groups
- There is no reason to think online advertising is any different.



Competition and Consumer Protection Issues in Online Advertising

Katie McInnis
Consumers Union



Competition and Consumer Protection Issues in Online Advertising

Panel Discussion:

Anja Lambrecht, Leigh Freund,
Allie Bohm, Howard Beales,
Katie McInnis, Garrett Johnson

Moderator: James Cooper



Break

2:30-2:45 pm

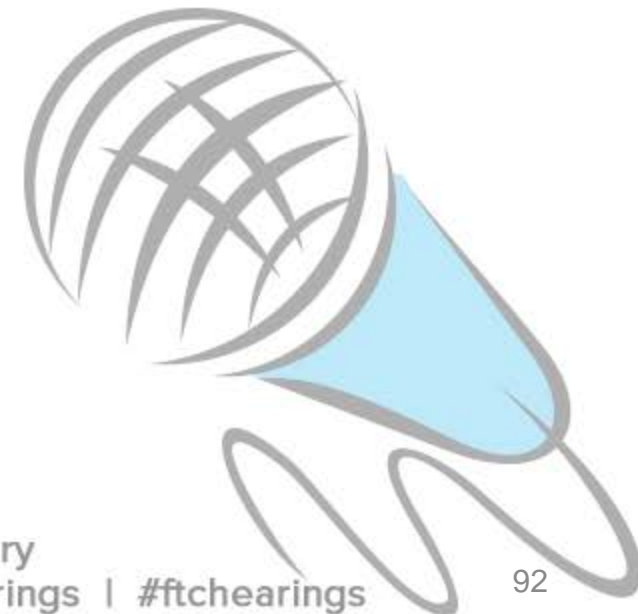


The Impact of Privacy Regulations on Competition and Innovation

Session moderated by:

Daniel Gilman

Federal Trade Commission
Office of Policy Planning



The Impact of Privacy Regulations on Competition and Innovation

Jane Bambauer

University of Arizona

James E. Rogers College of Law



The Impact of Privacy Regulations on Competition and Innovation: Privacy, Innovation, and Competition

Avi Goldfarb

University of Toronto

Rotman School of Management

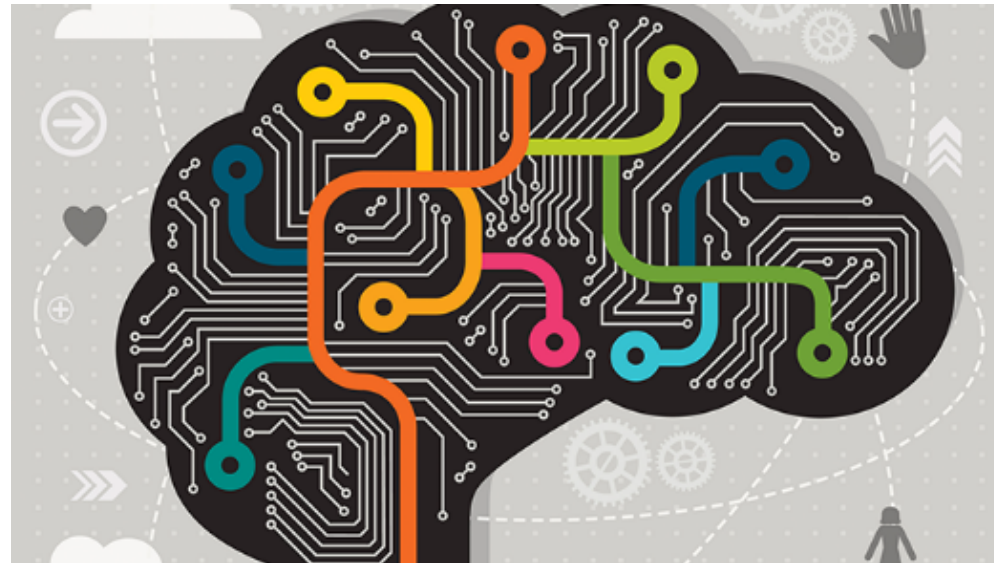


What Privacy used to be



Artist: Jack Dylan

Privacy is now a business issue



Privacy regulation can restrict innovation



Management Science

Publication details, including instructions for authors and subscription information:
<http://pubsonline.informs.org>

Privacy Regulation and Online Advertising

Avi Goldfarb, Catherine E. Tucker,



Privacy regulation can help large incumbents



PRIVACY REGULATION AND MARKET STRUCTURE

JAMES CAMPBELL

*University of Toronto
Toronto, ON, Canada
James.Campbell@rotman.utoronto.ca*

AVI GOLDFARB

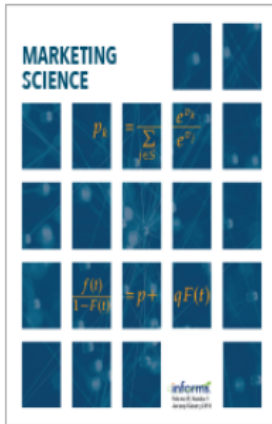
*University of Toronto
Toronto, ON, Canada
and National Bureau of Economic Research
agoldfarb@rotman.utoronto.ca*

CATHERINE TUCKER

*MIT Sloan School of Management
MIT, Cambridge, MA
and National Bureau of Economic Research
cetucker@mit.edu*

So why regulate privacy at all?

- Consumers care!



Marketing Science

Publication details, including instructions for authors and subscription information:

<http://pubsonline.informs.org>

Online Display Advertising: Targeting and Obtrusiveness

Avi Goldfarb, Catherine Tucker

American Economic Review: Papers & Proceedings 2012, 102(3): 349–353
<http://dx.doi.org/10.1257/aer.102.3.349>

Shifts in Privacy Concerns[†]

By AVI GOLDFARB AND CATHERINE TUCKER*



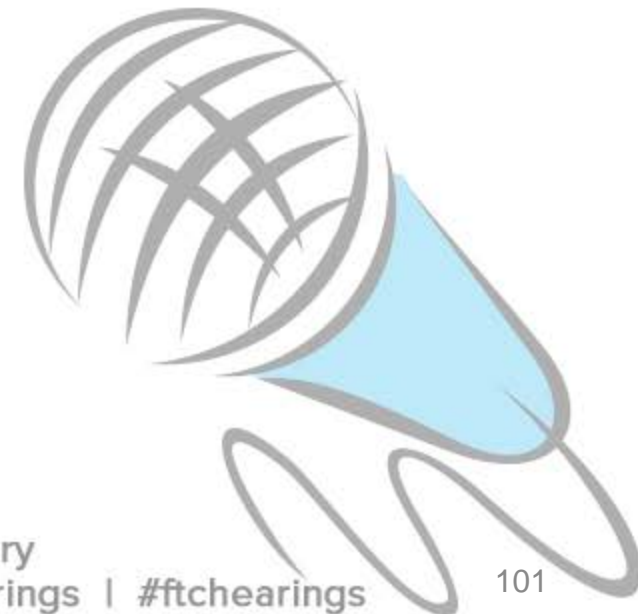
The policy issue

- Privacy regulation cannot be too strict, or else it will stifle data-driven innovation and competition.
- Privacy regulation cannot be too lax, or else consumers will be unwilling to provide data and, again, it will stifle data-driven innovation.
- Getting the balance right is the key challenge of privacy policy.
- Given the importance of data to innovation (particularly in AI), privacy policy is one important way that the regulatory environment will affect the rate and direction of innovation.



The Impact of Privacy Regulations on Competition and Innovation

Anja Lambrecht
London Business School



Privacy, Security and Financial Services

So you think you're safe doing internet banking?

Britain's leading expert on cyber security refuses to bank online. We ask if you should follow suit



▲ Going, going, gone ... most online banking fraud victims never see their money again. Photograph: Felix Clay

Source: <https://www.theguardian.com/money/2015/nov/21/safe-internet-banking-cyber-security-online> (2015)

MARKETING SCIENCE
CELEBRATING 30 YEARS

Vol. 30, No. 2, March–April 2011, pp. 355–367
ISSN 0732-2399 | EISSN 1526-548X | 11 | 3002 | 0355

informs

doi 10.1287/mksc.1100.0613
© 2011 INFORMS

Stuck in the Adoption Funnel: The Effect of Interruptions in the Adoption Process on Usage

Anja Lambrecht

London Business School, London NW1 4SA, United Kingdom, alambrecht@london.edu

Katja Seim

The Wharton School of the University of Pennsylvania, Philadelphia, Pennsylvania 19104,
kseim@wharton.upenn.edu

Catherine Tucker

MIT Sloan School of Management, Cambridge, Massachusetts 02142, cetucker@mit.edu

Many firms have introduced Internet-based customer self-service applications such as online payments or brokerage services. Despite high initial sign-up rates, not all customers actually shift their dealings online. We investigate whether the multistage nature of the adoption process (an “adoption funnel”) for such technologies can explain this low take-up. We use exogenous variation in events that possibly interrupt adoption, in the form of vacations and public holidays in different German states, to identify the effect on regular usage of being interrupted earlier in the adoption process. We find that interruptions in the early stages of the adoption process reduce a customer’s probability of using the technology regularly. Our results suggest significant cost-saving opportunities from eliminating interruptions in the adoption funnel.

Key words: online banking; technology adoption; adoption process; online security; self-service technology
History: Received: January 4, 2008; accepted: September 21, 2010; Pradeep Chintagunta served as the guest editor-in-chief and K. Sudhir served as associate editor for this article. Published online in *Articles in Advance* January 21, 2011.

Privacy / Adoption Trade-Off

- Consumers care about privacy and security verification hurdles to prevent illegitimate access
- But consumers also care about ease of use – or else may not adopt technology
- What are the implications for technology adoption?



Security and Technology Adoption



Key Insights

- Complex security protocols to verify customer identities reduce adoption and usage, as customers become frustrated by delays in the process
- Projections suggest that businesses could save significantly from reducing the delays
- Efforts to ensure online data security could potentially have unintended consequences for the diffusion of online services

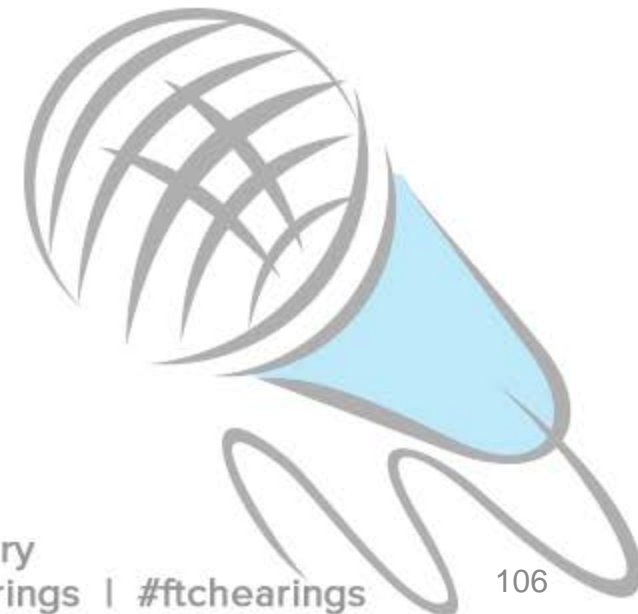


The Impact of Privacy Regulations on Competition and Innovation

Amalia Miller

University of Virginia

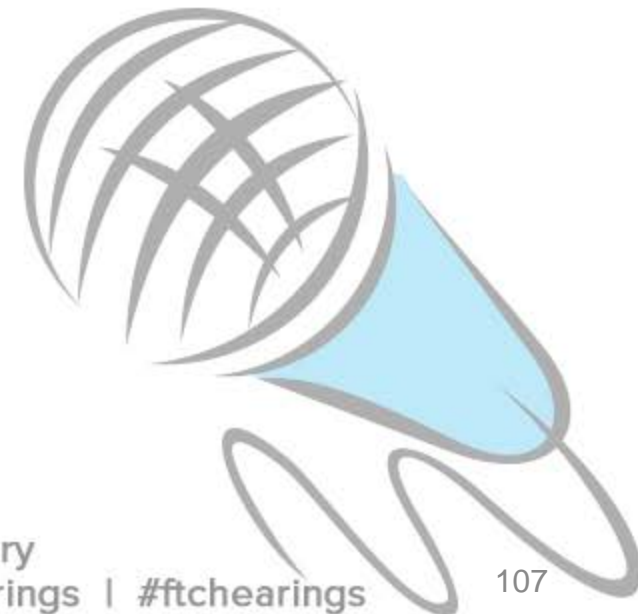
Department of Economics



The Impact of Privacy Regulations on Competition and Innovation: Confessions of a Convert

Lior Strahilevitz

University of Chicago
Law School



Thoughts from a Decade Ago

- Reputation information (concerning firms primarily, but sometimes individuals) is often a cheaper and better substitute for regulatory interventions
- State dissemination of personal information can further various policy objectives, albeit at a cost
 - Strahilevitz, Reputation Nation: Law in an Era of Ubiquitous Personal Information, 102 Northwestern Univ. L. Rev. 1667 (2008)



Thoughts from a Half Decade Ago

- Privacy regulations create winners and losers; consumer privacy rules can be regressive
- Interest group pressures, public choice dynamics largely explain contents of American and European privacy approaches
 - Strahilevitz, Toward a Positive Theory of Privacy Law, 126 Harvard Law Review 2010 (2013)



Thoughts from a Couple Years Ago

- What are obstacles to development of privacy-protective premium products?
- Nationally representative sample rated intrusiveness of automated content analysis of emails to deliver personalized ads as 7.63 (on scale of 1 to 10)
- 35.4% of respondents willing to pay any amount of money to get email service without content analysis for purpose of ad personalization
- Median willingness to pay was \$15 per year; just 3% of sample willing to pay \$120 per year or more
 - Strahilevitz & Kugler, Is Privacy Policy Language Irrelevant to Consumers?, 45 Journal of Legal Studies S69 (2014).



Thoughts for Today

- There is still some reason to think the relatively permissive regulatory environment in the US has contributed to high levels of innovation in our tech sector
- Outside of very salient fiascos that command sustained media attention, and maybe certain industries where privacy and security are of particular importance, competitive forces alone may not provide socially optimal incentives to firms
- Market works best when government, journalists, academics fully empowered to discover and publicize privacy and security snafus that are unknown to public
- “Do you trust Facebook to obey laws that protect your personal info?” 41% say yes; 51% say no (53% trust Apple; 60% Microsoft; 62% Google – Reuters 2018)



Why the Costs of Not Regulating Are Becoming Paramount

- Privacy breakdowns seem to be corroding fundamental components of free and democratic society
 - Cambridge Analytica and manipulation via personalization
 - Doxing, harassment, and organized trolling are scaring off the sensible center in various mediums for political discourse
 - Data breaches, phishing, spam, unlawful telemarketing are becoming major source of aggravation, prompting inefficient self-help like refusal to answer phone from unknown numbers, provision of false consumer info
 - New Chinese system of government social credit scoring (Xin Dai, *Toward a Reputation State*, 2018) raises concerns about potential for abuse



Harmonization Challenges from Inadequate Regulation

- Aspects of GDPR seem incompatible with US legal system
 - Right to prevent processing for purposes other than those initially justifying collection of data (Art. 5)
 - Right to erasure / right to be forgotten (Art. 17)
 - Right not to be subject to decision based solely on automated processing producing significant legal effects (Art. 22)
- Clever trans-Atlantic compromises are necessary to preserve robust global ecommerce



One Idea for Moving Forward

- “Deletion by default” as a privacy and security strategy
 - Mayer-Schönberger, Delete (2009).
 - Firms archiving consumer data have incentive to keep rather than purge
 - Desire for ephemerality driving youth towards Snapchat, away from networks with retention of persistent data (Xu et al., 2016).
 - Benefits of flipping default to deletion after 10 years for all personal info save photos and video content plausibly outweigh costs
 - Compare 15 USC § 1681c(b) (bankruptcy > 10 years old in credit report)
 - Voluntary purging now for CSLI, search engine queries; no uniformity



A Second Idea: Encouraging Firms to Get It Right the First Time

- US should stop embracing “one free goof” for firms
 - FTC fining authority arises mainly via consent decrees – competitors subject to different rules based on past conduct
 - California Consumer Privacy Act of 2018 – 30 days notice with time to cure violation before lawsuit can be brought
 - Not clear what justifies this approach for foreseeable injuries; examples elsewhere in law require special justification (e.g., good faith exception to exclusionary rule in Fourth Amendment doctrine)
 - Creates needless tension with Europe, which can impose large fines



The Impact of Privacy Regulations on Competition and Innovation

Rahul Telang
Carnegie Mellon University



What should a regulation look like?

- In an ideal world, we rely on consumers and markets to solve the problem.
 - Regulations then focus on removing frictions consumers face.
 - Make firm actions transparent and that will allow consumers to make better decisions for themselves and competitors to step in.
 - Should lead to innovation across the board - supply and demand for privacy technologies.
 - Can this model work? Can security/privacy be a feature and not a bug?
 - Very sketchy evidence so far.
 - Some aspect of GDPR also fit these principles.
 - If not, then how can we make this a “non zero-sum” game?



Regulation Uncertainty

- Uncertainty can sometimes be worse than the actual regulation.
 - If the regulations clearly specify what needs to be done and what are the consequences, industries figure out a way to move forward.
 - Data breach notification laws led to significant growth in cyber-insurance.
 - A strong insurance market in turn creates incentives for better security and privacy risk management.
- Our work (Idris et al 2016) also suggests that states with stronger privacy laws had higher adoption of Health information exchanges than the ones with unclear laws.

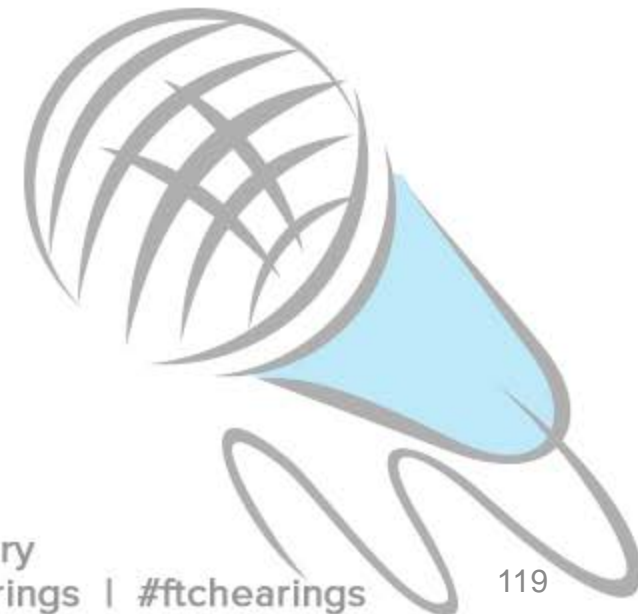


The Impact of Privacy Regulations on Competition and Innovation

Panel Discussion:

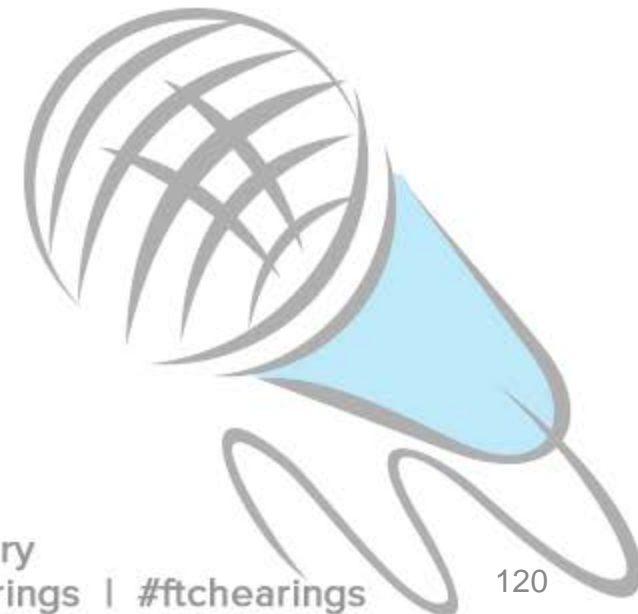
Jane Bambauer, Avi Goldfarb,
Anja Lambrecht, Amalia Miller,
Lior Strahilevitz, Rahul Telang

Moderator: Daniel Gilman



Break

3:50–4:00 pm

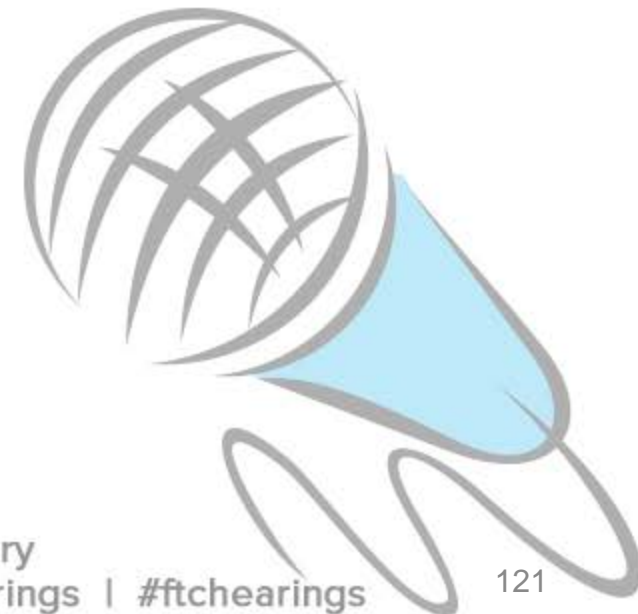


The Potential Impact of GDPR on Competition and Innovation

Session moderated by:

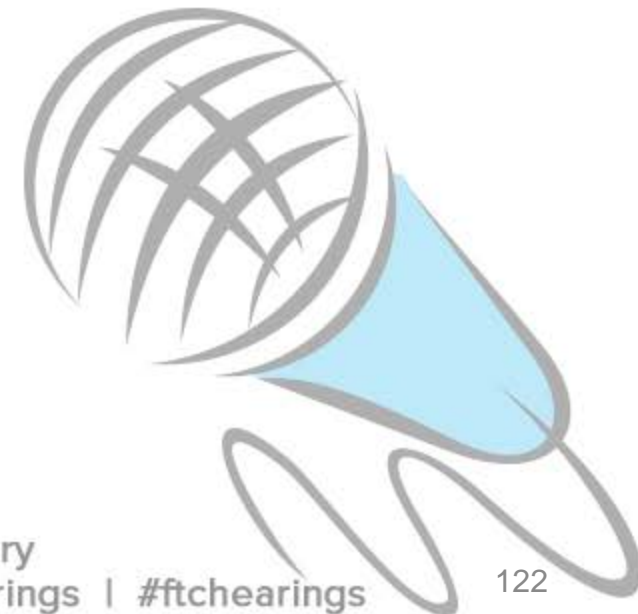
Hugh Stevenson

Federal Trade Commission
Office of International Affairs



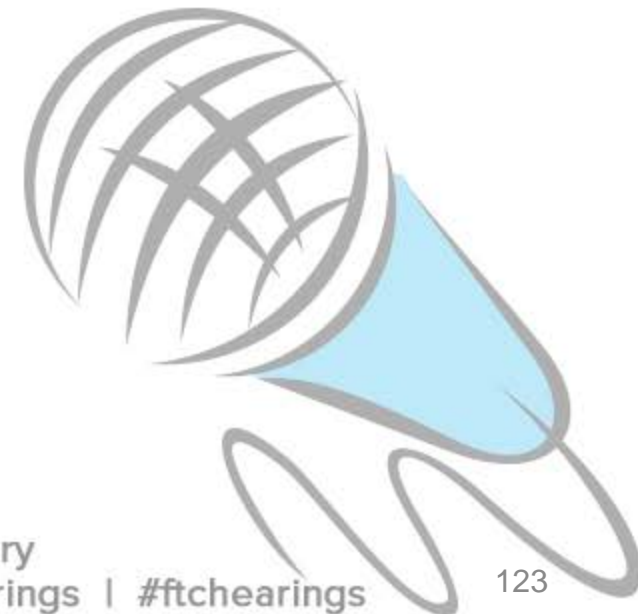
The Potential Impact of GDPR on Competition and Innovation

Renato Nazzini
King's College London



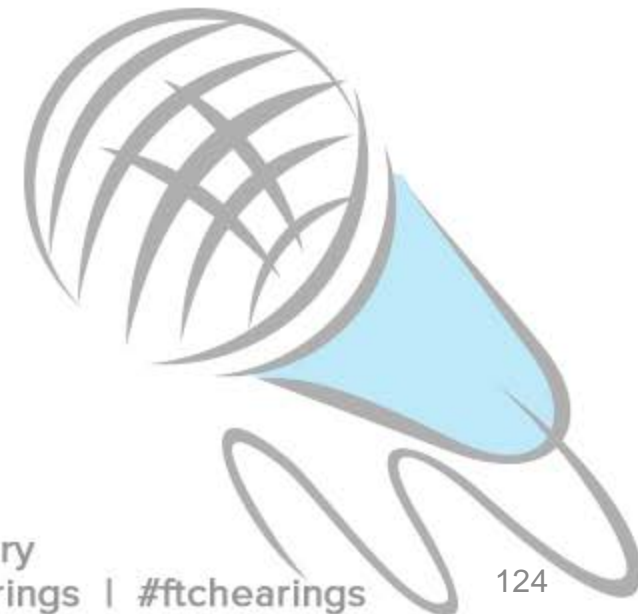
The Potential Impact of GDPR on Competition and Innovation

Garrett Johnson
Boston University
Questrom School of Business



The Potential Impact of GDPR on Competition and Innovation

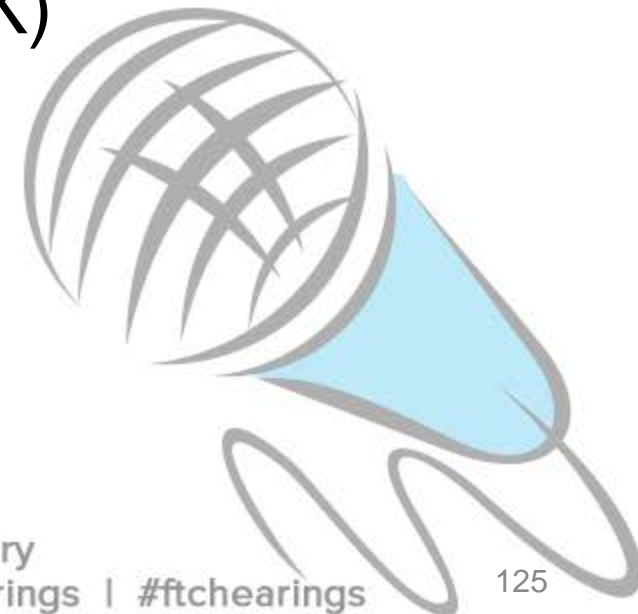
Jim Halpert
DLA Piper



The Potential Impact of GDPR on Competition and Innovation

Simon McDougall

Information Commissioner's Office (UK)



The Potential Impact of GDPR on Competition and Innovation

Rainer Wessely

Delegation of the European Union to the US

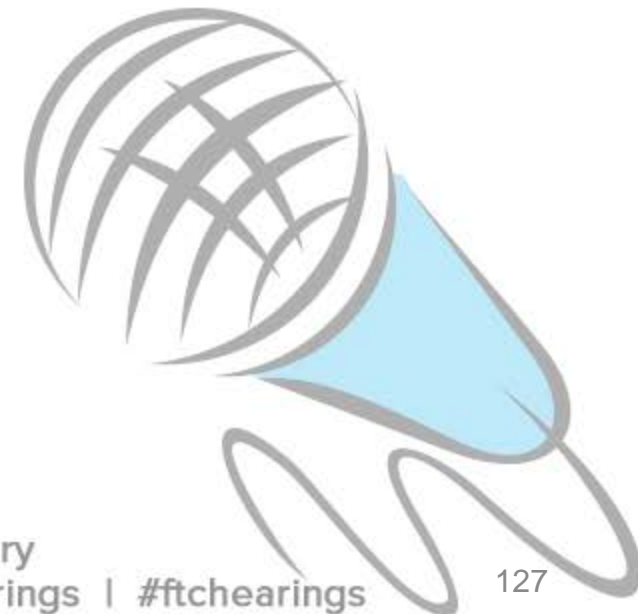


The Potential Impact of GDPR on Competition and Innovation

Orla Lynskey

London School of Economics

Law Department

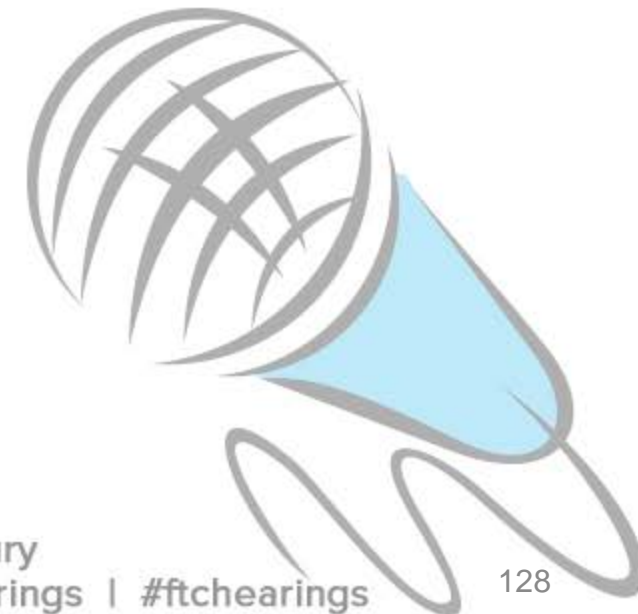


The Potential Impact of GDPR on Competition and Innovation

Panel Discussion:

Renato Nazzini, Garrett Johnson,
Jim Halpert, Simon McDougall,
Rainer Wessely, Orla Lynskey

Moderator: Hugh Stevenson



Thank You, Join Us Tomorrow

