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The Shift to Digital Advertising: Industry Trends and Policy Issues for Congress

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Summary

The United States is the world's largest advertising market. According to one estimate, domestic advertising revenue totaled $219 billion in 2012, accounting for about 1% of U.S. gross domestic product (GDP). Almost every major medium of information, including the press, entertainment, and online services, depends on advertising revenue. Advertising accounts for 60%-80% of total revenue at many newspapers and magazines and for most revenue at search engines and social networking sites.

Television still remains the main choice for advertisers, with ad revenue at almost $76 billion in 2012. However, spurred by the growth of paid search, online video, social networks, and mobile devices, advertising is moving to online platforms. Digital advertising revenue is estimated to have reached $36 billion, or 16% of total ad revenue, in 2012.

Companies can more easily track and measure consumer behavior online, which allows them to develop detailed profiles of their customers. Some Members of Congress have raised concerns about the business practices of online advertisers, particularly since their activities are largely unregulated in the United States. Digital publishers favor targeted consumer tracking because it allows them to provide free or low-cost ad-supported content. Without it, they argue, their ad-supported businesses could be harmed or possibly destroyed. Yet more than two-thirds of Americans do not like having their online behavior tracked and analyzed, according to a recent Pew Research Survey. Privacy and consumer advocates argue for more expansive federal regulations to protect consumers' online privacy.

Because of these concerns, recent Congresses, including the 113th, have focused on issues relating to digital advertising. They have held hearings on data privacy and proposed legislation including "Do Not Track" to give consumers the online equivalent of a "Do Not Call" option. In addition, lawmakers have proposed legislation to protect consumers from unlawful geolocation tracking of mobile devices. Congress is also looking at search advertising (where companies sell ads around consumer-initiated search results on web browsers) and fraudulent marketing over social networks.

The growing use of online and mobile tracking has raised regulatory concerns. The Federal Trade Commission (FTC) has published updated "Dot Com" disclosures for online ads; recommended a voluntary Do Not Track (DNT) function; and released new guidance on mobile advertising. The Food and Drug Administration (FDA) is studying pharmaceutical marketing in social media, with guidance required by June 2014. Since 2012, the Obama Administration and the FTC have introduced new privacy frameworks.

Other countries are debating, and some already have and others might adopt, new privacy laws. In particular, digital advertising in the European market is becoming more challenging as European lawmakers consider much stricter DNT rules, raising ever greater compliance hurdles for U.S. businesses. A patchwork of state regulations, including California's eraser law, also affects online advertising.

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Introduction

Advertising has been—and continues to be—transformed as consumers spend more of their time using electronic devices, such as smartphones and tablet computers, to access digital content of many varieties. This shift has given rise to difficult and novel public policy issues. This report examines some of these issues in the context of the structural shifts that have reshaped the advertising industry over the past decade.

Thirty years ago, consumers viewed an average of 560 ads per day.[1] As advertising has spread from newspapers and television shows to gasoline pumps, cell phones, and bus stops, the exposure to advertising is almost certainly higher today. By one count, the average American consumer may be exposed to 3,000 commercial messages every day.[2]

Advertising pays for much of the content on traditional media and online platforms. It provides 84% of television networks' revenue,[3] and until recently furnished 60%-80% of most daily newspapers' revenue.[4] Advertising generates more than 80% of total revenue at Internet companies such as Google, Yahoo, and Facebook,[5] and covers the cost of many of the free "apps" consumers download to increase the functionality of their smartphones and tablet computers.

Compared with traditional advertising, digital advertising seems to have some significant advantages for advertisers. For instance, small businesses can now reach millions of potential customers at low cost. Smartphones, tablets, and other mobile devices give advertisers greater access to more consumers for more hours of the day. Companies can now directly tout their products online and better tailor their ads to consumer behavior using the wealth of information consumers generate online. Nevertheless, digital advertising is causing industry-wide disruptions. The proliferation of ad-supported websites, online video, and blogs has pushed down advertising rates for both online and conventional media markets. Media traditionally dependent on advertising are being forced to find new business models as advertising revenue streams decline.

Industry Size and Concentration

SNL Kagan, an industry research firm, pegged total national and local ad revenues at $219 billion in 2012, down 9% from 2008 (see **Table 1**).[6] The television industry continues to capture the largest share of these revenues, 35% in 2012, and, according to SNL Kagan, its total advertising receipts have been rising even as advertisers' spending on direct mail, newspapers, radio, and

[1] Michael R. Solomon, Lisa Duke Cornell, and Amit Nizan, "Consumers and the Communications Process," in *Launch! Advertising and Promotion in Real Time*, p. 73.

[2] Plunkett Research, *Guide to the Advertising and Branding Industry*, May 3, 2013, p. 3.

[3] Emily Guskin, Mark Jurkowitz, and Amy Mitchell, *State of the News Media 2013*, Pew Research Center's Project for Excellence in Journalism, "Network News: A Year of Change and Challenge at NBC," March 18, 2013, p. 8, http://stateofthemedia.org/2013/network-news-a-year-of-change-and-challenge-at-nbc/.

[4] Newspapers are obtaining a greater share of their revenue directly from users, with a third of newspapers in the United States limiting access to all or part of their websites using paywalls. Circulation revenue increased by nearly 5% in 2012 for both weekday and Sunday editions.

[5] For example, advertising accounted for 95% of Google's revenue in 2012. Google Inc. Form 10-K for the year ending December 31, 2012, p. 12.

[6] SNL Kagan, "*Advertising Forecasts: U.S. Market Tends & Data for All Major Media*," 2012 Edition.

magazines has fallen. Digital advertising—revenue from Internet and mobile sources—represents a rising fraction of ad revenue, growing to 16% in 2012 from 10% in 2008.[7] Using the SNL Kagan estimate, total advertising revenue came to 1.4% of GDP in 2012.

Table 1. U.S. Advertising by Revenue Across Sectors

Billions of U.S. Dollars and Share of Total Revenue

Media	2008 Revenue	% of 2008 Total	2012 Revenue	% of 2012 Total
Television[a]	$68.9	29%	$75.7	35%
Direct mail	$55.1	23%	$45.4	21%
Digital (Internet/mobile)	$23.5	10%	$35.7	16%
Newspapers	$38.5	16%	$21.5	10%
Radio[b]	$17.8	7%	$15.5	7%
All other sectors[c]	$24.2	10%	$15.3	7%
Magazines	$12.6	5%	$10.0	5%
Total Ad Market	**$240.7**	**100%**	**$219.2**	**100%**

Source: SNL Kagan, "*Advertising Forecasts: U.S. Market Tends & Data for All Major Media*," 2012 Edition, pp. 18-19.

Note: 2012 figures are estimates.

a. Comprises broadcast TV (excluding digital/online), cable and satellite TV, and TV syndication-barter.

b. Includes satellite radio.

c. Includes outdoor/out of home, Yellow Pages, and business and farm publications.

Most ad spending is undertaken directly by advertisers, but a significant portion passes through advertising agencies, which develop advertising campaigns and purchase display space or broadcast time. According to the U.S. Census Bureau, advertising and related services firms had revenue of $94.8 billion in 2012. This represents 44% of all ad spending, as measured by SNL Kagan. In 2008, by comparison, these firms' revenue of $89.2 billion came to 37% of total ad spending, as measured by SNL Kagan.[8] The increasing role of ad agencies may reflect the fact that some types of advertising frequently placed directly by individuals or small firms, notably classified ads and real estate ads in newspapers, have migrated to online media, including websites such as Craigslist that may not charge for some ads.

Advertising agencies range from small operations heavily reliant on freelance talent to multinational, multi-agency conglomerates. According to the Bureau of Labor Statistics (BLS), an estimated 18,700 business establishments made up the U.S. advertising industry in 2012.[9]

[7] Television ad revenue showed especially healthy growth due to the 2012 Olympic Games and that year's political campaigns. Direct mail ad revenue fell by 18% during the same period.

[8] U.S. Census Bureau, *U.S. Government Estimates of Quarterly Revenue for Advertising and Related Services*, 2012, accessed August 14, 2013, http://www.census.gov/services/.

[9] BLS, *Quarterly Census of Employment and Wages*, advertising agency NAICS 54181, accessed July 18, 2013.

However, the five largest global advertising holding companies reportedly accounted for 73% of global ad agency revenue and more than half of U.S. agency revenue in 2012.[10]

Table 2. Leading Global Advertising Holding Companies

Agency Group	Location of Headquarters	2012 Worldwide Revenue	2012 Employment	Agency Network	Digital Agencies
WPP plc	United Kingdom	$16.5 billion	114,490	Young & Rubicam, JWT, Ogilvy & Mather, Grey	24/7 Real Media, Xaxis, Rockfish, Possible
Omnicom Group Inc.[a]	United States	$14.2 billion	71,100	BBDO, DDB, TBWA, GSD&M, Goodby Silverstein	Agency.com, Organic, Tribal, Critical Mass
Publicis Groupe S.A.[a]	France	$8.5 billion	57,500	Leo Burnett, Saatchi & Saatchi, BBH, Fallon, Kaplan Thaler	Razorfish, DigitasLBi, Performics, Rosetta
Interpublic Group of Companies (IPG)	United States	$7.0 billion	43,300	McCann, Lowe & Partners, Mullen, Martin, Campbell Ewald, Campbell Mithun	R/GA, Huge, Cadreon
Dentsu Aegis Network Ltd.[b]	Japan	$6.4 billion	37,450	Aegis, McGarry Bowen	360i, SearchIgnite, Netmining

Source: Compiled by CRS from AdAge Datacenter, Hoover's, and other public sources. Not all agencies owned by these holding companies are listed.

a. Omnicom and Publicis announced a merger agreement in July 2013.

b. Dentsu completed acquisition of Aegis in March 2013.

Each of these large holding companies owns or controls a large number of separate agencies,[11] which supply services from creative work and production to media planning, buying, and post-buy analysis (see **Table 2**). Omnicom and Publicis recently announced plans to merge in a deal that is still subject to approval by competition authorities, which are considering the extent to which the combined company would be able to exercise market power in the advertising market. A 2008 study found that the advertising and market services industry was not overly concentrated at the general level.[12] However, market research firm IBIS World recently wrote, "Industry concentration has increased over time as more agencies merge, acquire, and operate on a global basis."[13] Regulators will also need to take into account the increasing consolidation among sellers

[10] Bradley Johnson, "Big Adland Deals Reshape Ad Age's Agency Rankings," *Ad Age*, April 29, 2013, http://adage.com/article/agency-news/adland-deals-reshapes-agency-rankings/241115/.

[11] These holding companies are organized into subgroups or networks of affiliated units offering more or less similar mixes of services. The individual units operate independently and often compete with one another for client accounts. For example, Omnicom operates three global agency networks (BBDO, DDB, and TBWA) and several U.S. agencies.

[12] Alvin J. Silk and Charles King III, *Concentration Levels in the U.S. Advertising and Marketing Services Industry: Myth vs. Reality*, Harvard Business School Working Paper 09-044, September 24, 2008, p. 6, http://www.hbs.edu/research/pdf/09-044.pdf.

[13] Kevin Culbert, *Making a name: Agencies will continue looking to specialization and digital media to grow revenue*, (continued...)

of advertising space and time, such as television stations and search engine owners, with which advertising agencies must bargain.

The explosive growth of digital advertising raises questions about the role of advertising agencies in the future. Online advertising, as compared to traditional ad campaigns, is more data-driven, based on information drawn from users' Internet activity about consumer preferences, website popularity, and clicks per ad. Sellers of digital ads increasingly use mathematical formulas (algorithms) to determine price and placement of ads.[14] It is possible that digital-driven disintermediation may ultimately allow some advertisers to place their ads directly rather than engaging advertising agencies to handle this work, reducing the ad agencies' importance.

Industry Employment

Employment at advertising firms is one indicator of demand for advertising services. Given the importance of personnel in service-related businesses such as advertising, it is not surprising that an ad agency's largest cost is its personnel. At a typical agency, wages and salaries can account for 55%-60% of expenses.[15]

At the end of 2012, the U.S. advertising industry employed 178,500 workers at an average annual pay of more than $90,000.[16] Advertising employment peaked above 200,000 in 2000, but has fluctuated in a relatively narrow range over the past decade (see **Figure 1**). Approximately 37% of total advertising industry employment is in either New York or California, although every state has some employment directly related to advertising.

U.S. advertising agencies traditionally charged clients a 15% commission based on the cost of media placement.[17] Such pricing continued to be the industry standard even after courts in the 1950s ruled in favor of magazine and newspaper publishers' claims that the commission system limited their ability to directly bargain with advertisers. Industry compensation has changed significantly in recent decades, with most large national advertisers paying fixed fees to their ad agencies rather than commissions.[18]

(...continued)

IBISWorld, January 2013, p. 21.

[14] Edward Landry, Carolyn Ude and Christopher Vollmer, *HD Marketing 2010: Sharpening the Conversation*, Booz & Co. with the Association of National Advertisers, Interactive Advertising Bureau and American Association of Advertising Agencies, 2009, p. 6, http://www.boozallen.com/media/file/HD_Marketing_2010.pdf.

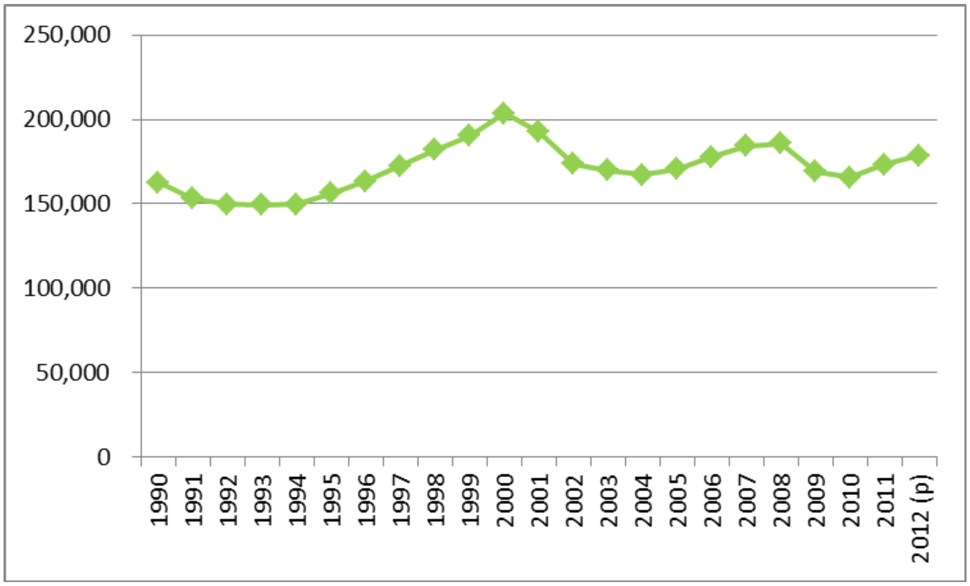
[15] Wescott Rochettee, *Industry Surveys*, Standard & Poor's, Publishing & Advertising, June 2013, p. 34.

[16] BLS, QCEW, accessed on July 17, 2013 at http://www.bls.gov/cew/.

[17] Ronald Lane, Karen King, and Tom Russell, "The Advertising Agency, Media Services, and Other Services," in *Kleppner's Advertising Procedure, 17/E* (Prentice Hall, 2011), p. 188.

[18] Mohammad Arzaghi, Ernst R. Berndt, James C. Davis, and Alvin J. Silk, *The Unbundling of Advertising Agency Services*: *An Economic Analysis*, Harvard Business School, Working Paper 11-039, 2008 and 2010, p. 5, http://www.hbs.edu/faculty/Publication%20Files/11-039.pdf.

Figure 1. Advertising Industry Employment



Source: BLS, Quarterly Census of Employment and Wages, NAICS 54181.

Note: 2012 data are preliminary.

In recent years, some advertising agencies have begun to focus on developing higher-growth non-advertising businesses, including market research, media planning, interactive media, and customer relationship management. They are also deriving a larger share of revenue from non-advertising sources such as special events promotion and public relations management. Revenue from these sources may be less cyclical than that from advertising.[19]

Digital Advertising

The most recent structural changes affecting advertising began around 1995, as consumers started to migrate from traditional media sources to online platforms. Online and mobile activities have accounted for steadily growing shares of consumers' media use at the expense of all other types of media (see **Appendix**), and advertisers have been forced to rethink their marketing efforts in recognition of that trend.

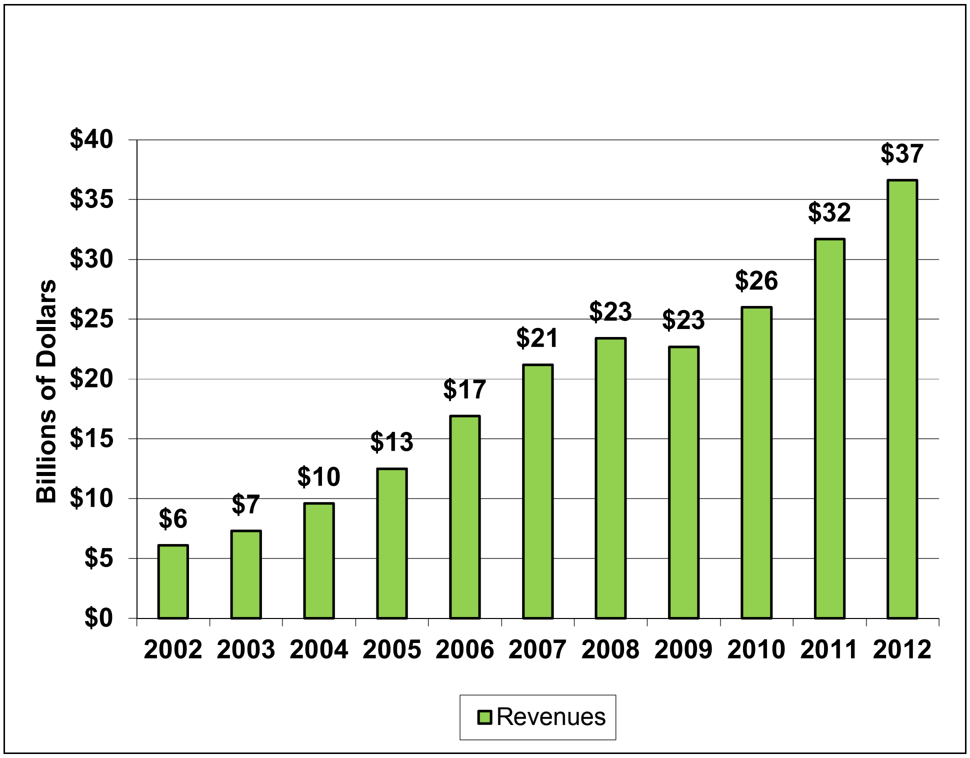
In 2012, Internet advertising revenues in the United States totaled $37 billion, a rise of 500% from $6 billion 10 years earlier (see **Figure 2**), according to the Interactive Advertising Bureau (IAB).[20] eMarketer, a market research firm, projects that online ad spending may total $61 billion by 2017.[21]

[19] Standard & Poor's Industry Survey, *Publishing & Advertising*, June 2013, p. 35.

[20] IAB and PricewaterhouseCoopers, *IAB Internet Advertising Revenue Report*, 2012 Full Year Results, April 2013, p. 7, http://www.iab.net/media/file/IAB_Internet_Advertising_Revenue_Report_FY_2012_rev.pdf.

[21] eMarketer, "Mobile Pushes U.S. Digital Ad Market Higher," August 21, 2013, http://www.emarketer.com/Article/Mobile-Pushes-US-Digital-Ad-Market-Higher/1010149.

Figure 2. Internet Advertising Revenues, 2002-2012



Source: IAB and PwC, *IAB Internet Advertising Revenue Report*, 2012 Full Year Results, April 2013.

Trillions of digital ads are served up annually.[22] These ads are linked to many types of content and may be viewed on a wide variety of devices. According to Nielsen data, more than 209 million Americans were active online in January 2013.[23] Facebook reported nearly 230 million daily desktop and mobile device views in the United States at the end of June 2013.[24]

Although television remains the dominant advertising choice, in 2011 spending on online advertising exceeded spending on print advertising for the first time. Due to the expanding online market, many print publications face increased financial stress. They have responded by attempting to increase their own online advertising revenues, although few print publications have managed to charge enough for online ads to make up for the loss of print revenue. In 2012, online ad revenue made up 15% of total newspaper advertising revenues, compared with 7% in 2007.[25]

Although online and traditional advertising are similar in many ways, there are important differences. A print newspaper may be the dominant source of information in its local market and

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[22] Nearly 5.3 trillion displays ads were served to U.S. users in 2012 alone, according to ComScore. Eli Goodman, *U.S. Digital Future in Focus, 2013*, ComScore, March 7, 2013, p. 22.

[23] Nielsen, *January 2013: Top U.S. Entertainment Sites and Web Brands*, Media and Entertainment, March 22, 2013, http://www.nielsen.com/us/en/newswire/2013/january-2013--top-u-s--entertainment-sites-and-web-brands.html.

[24] InsideFacebook, Facebook to launch country level MAU and DAU metrics, August 13, 2013, http://www.insidefacebook.com/2013/08/13/facebook-to-launch-country-level-mau-and-dau-metrics/#more-84171.

[25] Newspaper Association of America, with Rick Edmonds and Emily Gaskin providing the 2012 estimates, *Newspapers: By the Numbers, State of the Media*, updated May 7, 2013.

therefore be able to charge advertisers a premium price, but on the Internet that same newspaper competes against hundreds or thousands of websites, bloggers, and Twitter users, and has less pricing power. The supply of online advertising opportunities is almost unlimited, and very few of the estimated 670 million websites on the Internet are essential buys for advertisers.[26] The abundance of ad inventory means that online advertising rates can be substantially lower than ad rates in other media. A 2011 Federal Communications Commission report found that in May 2010 a typical online ad cost about $2.52 per 1,000 viewers, whereas the average cost per thousand viewers on primetime broadcast television networks was $19.74.[27] Digital advertising can also be sold in other ways, including cost-per-click[28] or by keyword purchase.[29]

Despite the multitude of websites and social media outlets, the online advertising market is a concentrated market. In 2012, the top 10 sellers of advertising space on websites accounted for more than 70% of online ad revenue, and the top 50 for nearly 90%, according to IAB.[30]

Real-time bidding systems (RTBs) like Google's DoubleClick or Facebook's Exchange let marketers buy and publishers sell advertising inventory through automated exchanges.[31] RTBs account for a relatively small part of total online ad spending, at 13%, or $1.9 billion, in 2012,[32] but market research firm IDC predicts that they may handle 27% of all U.S. online display advertising by 2016.[33] Over time, automated ad exchanges may be used to sell other forms of advertising, such as digital radio and electronic screens on billboards and bus shelters. Some ad companies have started to build automated ad buying systems for television and radio.[34]

The regulatory and legal implications of RTBs are getting increased attention from lawmakers and regulators because these new systems raise issues about companies' data and consumer privacy disclosure practices in online and mobile environments.[35] Concerns about anticompetitive business practices have also come into play, with attention to whether algorithms and restrictions on the use of certain data by advertisers could threaten competition and innovation.

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[26] Netcraft, May 2013 Web Server Survey, accessed August 13, 2013, http://news.netcraft.com/archives/2013/05/03/may-2013-web-server-survey.html.

[27] Steven Waldman, *The Information Needs of Communities*, FCC, "The Changing Media Landscape in a Broadband Age," July 2011, p. 127.

[28] The cost-per-click (CPC) model counts when users actually click through from an ad to the advertiser's landing page. The click-through rate is the number of clicks divided by the number of ad requests. The advertiser and publisher agree on a fixed amount that will be paid for each click.

[29] Advertisers may buy keywords from search engines so that their ads appear when specific word(s) are used as search terms. The amount paid for a keyword depends on a word's competitiveness.

[30] IAB, "Internet Advertising Revenue Report: 2012 Full Year Results," p. 11, April 2013.

[31] RTB simply means delivering the right commercial communication, to the right person, at the right moment (or place) through the right device based on algorithms that allow marketers to buy media automatically in real time.

[32] eMarketer, "Real-Time Bidding to Make Up Quarter of all Display Spending," press release, November 14, 2012, http://www.emarketer.com/newsroom/index.php/realtime-bidding-poised-quarter-display-spending/.

[33] Karsten Weide, *Real-Time Bidding in the US and the World 2011-2016*, IDC, October 2012, p. 7.

[34] Suzanne Vranica, "Television Ad Buying to Mimic Online Rivals," *Wall Street Journal*, August 20, 2013.

[35] Federal Trade Commission, *In the matter of Real-Time Targeting and Auctioning, Data Profiling Optimization, and Economic Loss to Consumers and Privacy*, February 18, 2011, http://www.ftc.gov/os/comments/privacyreportframework/00338-57839.pdf.

Measurement Issues

Measuring the effectiveness of advertising has long been a challenge. Newspaper and magazine circulation figures are compiled by the Alliance for Audited Media (AAM), formerly the Audit Bureau of Circulations. Nielsen, using consumer panels and electronic devices, collects television viewership numbers.[36] Arbitron, using its proprietary Personal People Meter (PPM) technology, produces audience data on radio shows and stations.[37] Figures from these groups are used to determine the prices of ads on traditional media outlets. In addition, many outlets commission studies to obtain demographic information, such as the age distribution of a magazine's readers, that may be of interest to advertisers.

Advertisers and others have long groused about audience measurement techniques, and they have become even more skeptical as consumers increasingly view media in digital formats.[38] For example, digital editions of newspapers (e.g., tablet or smartphone apps, PDF replicas, or e-reader editions) made up 19.3% of U.S. daily newspapers' total average circulation in March 2013.[39] In many cases, newspaper and magazine subscribers have access to both paper and electronic publications, and meaningful ratings measurement must track readership across various formats. No commercially available national syndicated cross-platform audience measurement service exists today. Moreover, technology increasingly allows consumers to view digital content while bypassing advertisements, so audience data may not accurately provide the information of greatest interest to advertisers.

In the digital world, advertisers can count the number of people who click on an ad, forward an e-mail, or view a video on their personal computer or mobile device. They can easily track ad impressions,[40] click-throughs, unique visits, and time spent on each page. Cable and satellite digital set-top boxes can track users and deliver different ads for different audiences.[41] Cell phone companies are also able to follow customers on mobile phones, which provide a wealth of data for advertisers.[42] Companies like Google have built their business models upon gathering as much information as possible about consumer interests and behavior. The ability to monitor consumer response in this granular way has large financial consequences for both advertisers and sellers of advertising. According to the IAB, 66% of online ads sold in 2012 were priced on a performance basis such as cost-per-click, meaning that if the advertisement was ineffective in attracting consumer interest, the advertiser paid little or nothing.[43]

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[36] Nielsen uses an electronic people meter to measure prime-time national television viewing based on a representative sample, and supplements this information through occasional use of written diaries.

[37] Arbitron's PPM is a pager-like device that survey participants wear. It monitors codes embedded in radio and TV audience streams inside and outside a home.

[38] In 2009, the Coalition for Innovative Media Measurement (CIMM) was formed to identify new ways to measure audiences across media platforms. CIMM members include Microsoft, NBC Universal, Time Warner, and advertising companies such as Omnicom and Publicis.

[39] AAM, *Top 25 U.S. Newspapers for March 2013*, March 2013, http://www.auditedmedia.com/news/research-and-data/top-25-us-newspapers-for-march-2013.aspx.

[40] In 2004, IAB developed a global standard that counts a single instance of an online ad loading onto a page of content. Its ad impression measurement guidelines are described at http://www.iab.net/campaign_measurement_audit.

[41] Jessica E. Vascellaro, "TV's Next Wave: Tuning In to You," *Wall Street Journal*, March 6, 2011.

[42] Tom Simonite, "Mobile-Ad Firms Seek New Ways to Track You," *MIT Technology Review*, April 9, 2012, http://www.technologyreview.com/news/427453/mobile-ad-firms-seek-new-ways-to-track-you/.

[43] IAB, *IAB Internet Advertising Revenue Report*, 2012 Full Year Results, April 2013, p. 17.

Questions about the accuracy of digital metrics abound. According to a 2009 study by comScore, only 16% of Internet users clicked on an ad and just 8% of Internet users accounted for 80% of all clicks; the company contends that ignoring Internet users who do not click on ads is unwise.[44] Measurement of clicks can also be manipulated through click fraud, the practice of generating sham clicks to make ads look more popular and thereby increase website owners' revenues. One recent study reported that accidental or fraudulent clicks cost companies 40% of their mobile advertising budgets.[45]

Ratings measurement firms are competing to develop more finely tuned cross-platform measurement tools. Arbitron, which traditionally gathers data on radio listening patterns, now includes high-definition and streaming listening in its national broadcast ratings[46] and is planning a service that will measure audio as a single medium, regardless of whether it is distributed over the air or via digital streaming.[47] Nielsen plans to introduce services to measure television shows by their level of social media chatter; to measure video viewing over streaming services such as Netflix and Amazon and on TV-enabled game systems such as X-Box and PlayStation alongside traditional audience measurement; and to measure video streaming from each television network's own website.[48]

Last year, comScore, a competitor to Nielsen and Arbitron, introduced a service called vCE to track viewing on TV, web, and mobile platforms.[49] Rentrak measures TV content viewing by audiences using scheduled interactive video-on-demand and digital video recorders.[50] TRA, acquired by video recording company TiVo in 2012, attempts to correlate households' television TV viewing and purchasing habits.[51]

In September 2013, following a nine-month review process, the Federal Trade Commission (FTC) approved the acquisition of Arbitron, which holds about 90% of the market for radio audience measurement, by Nielsen, which has about 80% of the TV ratings industry market.[52] The FTC's approval included one significant condition: it required Nielsen to make available for license certain Arbitron technology and related data to ensure continued competition in TV and radio audience measurement.

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[44] comScore, "comScore and Starcom USA Release Updated 'Natural Born Clickers' Study Showing 50 Percent Drop in Number of U.S. Internet Users Who Click on Display Ads," press release, August 4, 2010.

[45] TradeMob, *Study of Mobile Clicks*, September 3, 2012, p. 1.

[46] Arbitron, *Thoughts on Comparing Audience Estimates*, 2011, p. 2, http://www.arbitron.com/downloads/comparing_audience_estimates.pdf. Arbitron's radio syndicated ratings service measures audience size using both a paper diary service and its Portable People Meter (PPM), an electronic device.

[47] In 2013, according to Arbitron and Edison Research estimates, about 45% of Americans had listened to online radio in the last month, compared with 17% in 2003. Arbitron, *The Infinite Dial 2013: Navigating Digital Platforms*, http://www.edisonresearch.com/wp-content/uploads/2013/04/Edison_Research_Arbitron_Infinite_Dial_2013.pdf.

[48] Alex Ben Block, "Nielsen Agrees to Expand Definition of TV Viewing," *Hollywood Reporter*, February 20, 2013.

[49] comScore, "comScore validated Campaign Essentials™ (vCE) Breaks New Multi-Platform Ground With Validation of Online Video Ad Campaigns," press release, October 1, 2012, http://www.comscore.com/Insights/Press_Releases/2012/10/comScore_validated_Campaign_Essentials_vCE_Breaks_New_Multi-Platform_Ground_With_Validation_of_Online_Video_Ad_Campaigns.

[50] Rentrak, *2013 Annual Report*, pp. 3-6.

[51] Greg Franzese, "TiVo's Acquisition of TRA Points to Importance of Analytics and Big Data," *Videomind*, July 19, 2012.

[52] FTC, FTC Puts Conditions on Nielsen's Proposed $1.26 billion Acquisition of Arbitron, September 20, 2013, http://www.ftc.gov/opa/2013/09/nielsen.shtm.

Online Advertising Environment

The collection of large amounts of data for advertising purposes has proved controversial. Some Members of Congress and industry regulators have raised questions about what companies do with the data they collect, as consumers are often uninformed about how, where, and to what extent their information is used. They are also concerned about customer targeting and privacy safeguards attached to search and behavioral advertising and social media marketing. The Senate Commerce Committee and the FTC have both taken closer looks at industry practices.

Search Advertising

A difficult challenge for advertisers is how to find potential customers in the large, but scattered, digital world. Search advertising, in which ads are linked to particular search terms and are featured near the "natural" or "organic" search results on the search results page, barely existed a decade ago, but has emerged as one answer.[53] In 2012, search ad revenue stood at around $17 billion, accounting for about 6% of the overall ad market and nearly half of the digital ad market (see **Table 3**).[54] The search model, which includes contextual and behavioral targeting, is viewed as an effective means of matching relevant information with user interests, helping advertisers reach potential customers at the moment they might be considering the purchase of an automobile or a vacation trip.[55] Advertisers generally pay only if a consumer clicks on an ad.[56]

Table 3. Internet Advertising Spending by Type of Ad

In Billions of Dollars

	2011	2012	% change
Search	$15.1	$17.6	16.4%
Display	$12.3	$15.0	21.7%
Classified	$2.6	$2.6	0.8%
Referrals/lead generation	$1.5	$1.7	12.5%
E-mail	$0.2	$0.2	4.8%
Total	$31.7	$37.1	16.9%

Source: Pew Research Center, *2013 State of the News Media*, p. 17.

Notes: Search ads refer to advertising that comes up next to the results of a search on a website such as Google or Bing. Display ads include images or texts that are placed on a website, such as banner ads, video, rich media, and sponsorship. Classified ads include for sale, real estate sale and rental, and employment advertising. Referrals/lead generation refers to "word of mouth" ads such as e-newsletters or links that allow a person to refer a product to a friend.

[53] Search advertising, traced back to GoTo (originally Overture Services, later acquired by Yahoo), lets advertisers pay to have links appear whenever certain keywords or collections of words are part of a search.

[54] IAB, IAB Internet Advertising Revenue Report, 2012 Full Year Results, April 2013, p. 12, http://www.iab.net/media/file/IAB_Internet_Advertising_Revenue_Report_FY_2012_rev.pdf.

[55] Advertisers using the search model bid for certain keywords such as "Aruba vacation," "laptop," or "Prada shoes." If they win, their ads are displayed on web pages where search results for those products or services are listed.

[56] Search ad prices are set through auctions and fluctuate from minute to minute and from keyword to keyword. The most competitive keywords can cost as much as $370 for each click an ad receives. SpyFu maintains a list of keywords with the highest cost-per-click, http://www.spyfu.com/TopList.aspx?listId=3.

An online advertiser can easily track users who navigate to its website when they search for certain products or services. Once the user has clicked on an ad associated with a particular search term, the advertiser can use its internal server logs to trace how the individual behaves.[57]

The importance of search as an advertising medium has generated antitrust concerns. In some European countries, Google has a market share of more than 90% of all Internet searches.[58] In November 2010, the European Commission began an investigation of whether Google "has abused a dominant position in online search, in violation of European Union rules (Article 102 TFEU)."[59] The investigation responded to complaints by publishers and competitors, such as online map companies, about unfavorable treatment of their services in Google's unpaid and sponsored search results, as well as alleged preferential treatment of Google's own services.[60] The European Commission's investigation may well raise new issues, such as whether a search provider's secret algorithms can be anticompetitive when used for certain purposes. Although Google's ad practices have angered privacy advocates and attracted the attention of antitrust regulators in the United States as well, the FTC closed an investigation into Google's business practices after finding that it had not manipulated search results.[61]

Ad Networks and Ad Exchanges

Ad networks, or ad brokers—reportedly numbering more than 300 companies—pool hundreds or even thousands of web pages together to facilitate advertising across the web and many other digital platforms (e.g., RSS feeds, blogs, and e-mails). Such networks deliver ads from central computer servers that can engage in targeting, tracking, and reporting of impressions.

Online publishers rely on ad networks such as Google Ad Network, Casale Media Network, ValueClick Networks, and Yahoo!SearchMarketing to sell inventory that they have not succeeded in selling directly.[62] In some cases, website owners use networks as a substitute for direct selling. Ad networks are also an important sales tool for small web ventures that have limited resources to do their own marketing. More recently, the hundreds of ad networks have given rise to a new kind of ad inventory consolidator, the ad exchange, which matches ad buyers with ad sellers hoping to fill excess inventory.[63]

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[57] Server logs refer to web pages that will log the type of request and will store information such as IP address (a string of numbers associated with a particular computer), date, and time of page request, and what page was loaded and page prior to this one. Server logs can only be seen by website owners and are used for analytics.

[58] "EU Demands Google Do More to Settle Antitrust Case," *Associated Press*, May 28, 2013, http://cnsnews.com/news/article/eu-demands-google-do-more-settle-antitrust-case.

[59] Europa, "Antirust: Commission probes allegations of antitrust violations by Google," press release, November 30, 2010, http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/1624.

[60] European Commission, "The Google Antitrust Case: What is at Stake," speech by Joaquin Almunia, October 1, 2013, http://europa.eu/rapid/press-release_SPEECH-13-768_en.htm.

[61] The FTC voted unanimously to close its investigation without bringing charges, although some commissioners said Google should be sanctioned for using online search results to draw consumer traffic to its own services. Google did agree to make some minor changes to its search advertising practices, avoiding a formal consent decree or litigation. Statement of the Federal Trade Commission regarding Google's Search Practices In the Matter of Google Inc., FTC File Number 111-0163, January 3, 2013, http://ftc.gov/os/2013/01/130103googlesearchstmtofcomm.pdf.

[62] comScore, "comScore Media Metrix Ranks Top 50 Web Properties for December 2012," press release, January 28, 2013, http://www.bloggerjourney.com/2013/02/top-20-largest-ad-networks-in-december.html.

[63] While there are hundreds of ad networks, the complexity associated with setting up and running a real-time ad exchange means that there is only a handful, including RightMedia, OpenX, Google's DoubleClick Ad Exchange, (continued...)

Some established companies say online advertising networks and exchanges affect prices for all ad-dependent companies because they can buy up blocks of residual or less attractive ads and release them on the market at fire-sale prices, in some cases for as little as 5%-10% of what the publisher might charge for the exact same ad space on a direct buy from an ad agency.[64] The Online Publishers Association, a coalition of media and entertainment companies with a digital presence such as the *Wall Street Journal*, *New York Times*, and *ESPN.com*, released a study in August 2009 arguing that ads sold via brokers were less effective than ads sold directly on their websites—for which they can charge higher prices.[65] But many prominent media companies use ad networks to sell at least part of their own inventory that they cannot sell directly.

As ad networks and ad exchanges proliferate, lawmakers have started to focus on how they use data targeting and how they track behavioral activity.[66] The White House, IAB, and leading ad networks, including Google, Yahoo, and Microsoft, recently agreed to self-regulatory guidelines and best practices whereby they agree to prohibit websites that engage in copyright piracy or the sale of counterfeit goods from participating in an ad network's advertising program.[67]

Ad Platforms

Advertisers have had to change their strategies quickly as digital consumers have changed the way they spend their time. The digital marketplace includes a variety of platforms:

- **Mobile.** More than 9 in 10 U.S. adults now own a mobile phone.[68] As ownership of smartphones has increased, advertising on mobile phones has grown at a torrid pace, with revenues rising from $251 million in 2007 to $4.75 billion in 2012.[69] By 2017, revenues could reach $27 billion, according to eMarketer.[70] One challenge is that advertisers reportedly pay less for these ads than other online ads because consumers are less likely to make a purchase on their phones, perhaps due to the smaller screen size of mobile devices.[71]
- **Social networks.** Two-thirds of online adults in the United States use social networking sites,[72] including networking tools such as Facebook and Twitter;

(...continued)

Microsoft's AdECN, and Facebook Exchange (FBX).

[64] "History of the Ad Exchange Landscape Part I: Rise of the Ad Networks," *Ad Ops Insider*, April 28, 2011, http://www.adopsinsider.com/ad-exchanges/history-of-the-ad-exchange-landscape-part-i-rise-of-the-ad-networks/.

[65] Online Publishers Association, "OPA Members' High-Quality Content Environments Raise Awareness, Message Association, Brand Favorability and Purchase Intent More than Portals and Ad Networks," press release, August 13, 2009, http://www.online-publishers.org/newsletter.php?newsType=pr&newsId=545.

[66] U.S. Congress, Senate Commerce, Science, & Transportation, A Status Update on the Development of Voluntary Do-Not-Track Standards, 113th Cong., April 24, 2013.

[67] Best Practices Guidelines for Ad Networks to Address Piracy and Counterfeiting, http://www.2013ippractices.com/bestpracticesguidelinesforadnetworkstoaddresspiracyandcounterfeiting.html.

[68] Experian Marketing Services, *The 2013 Digital Marketer: Life is the Channel*, 2013, p. 100, http://www.experian.com/marketing-services/2013-digital-marketer-report.html.

[69] SNL Kagan, "*Advertising Forecasts: U.S. Market Tends & Data for All Major Media*," p. 125, 2012 Edition.

[70] eMarketer, *Facebook to See Three in 10 Mobile Display Dollars this Year*, April 4, 2013, http://www.emarketer.com/Article/Facebook-See-Three-10-Mobile-Display-Dollars-This-Year/1009782.

[71] Claire Cain Miller, "Advertising Relearned for Mobile," *New York Times*, October 28, 2012.

[72] Maeve Duggan and Joanna Brenner, *The Demographics of Social Media Users 2012*, Pew Research Center's Internet (continued...)

social sites such as Reddit, Digg, and propeller; photo and video sharing sites such as Flickr and You Tube; and social bookmarking sites such as Delicious. This segment accounts for nearly 20% of total time that U.S. adults spend on personal computers and 30% of total time online via mobile devices.[73] Social networking sites typically garner most of their revenues through sale of advertising space.[74] An advantage of social media advertising is that it allows advertisers to target users' demographic information. Advertisers, however, must be aware that social network members may be less inclined to accept advertising based on their personal data than visitors to other types of websites. According to Nielsen's 2012 Social Media Report, a third of users are annoyed by ads on social networks.[75]

- **Gaming.** More than half of U.S. households own a dedicated game console, according to the Entertainment Software Association (ESA). The industry trade group says that casual, social games are the most frequently played online games, followed by action, sports, strategy, and role-playing games.[76] Advertisers are trying to reach these consumers by running ads before digital games on online sites or embedding their ads into the games. Ad revenues from mobile gaming were reportedly around $200 million in 2012.[77]
- **Digital Video.** Six out of seven U.S. consumers reported watching video content over the Internet in 2012, according to a 2013 survey by Accenture.[78] After initially struggling to figure out how to sell ads against consumer-generated content, advertisers have become comfortable with the medium. Another advertising strategy associated with video is viral ads—videos and other promotions that gain an audience through online word of mouth.[79] eMarketer recently projected U.S. spending on digital video ads to be $4 billion in 2013, doubling to $8 billion by 2016.[80] Video ads generally sell for higher rates than banner ads.

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& American Life Project, February 14, 2013, p. 2, http://pewinternet.org/~/media//Files/Reports/2013/PIP_SocialMediaUsers.pdf.

[73] Nielsen, *State of the Media: The Social Media Report 2012*, 2012, p. 4.

[74] For instance, advertising accounted for 84% of Facebook's total revenue in 2012. Facebook, 10-K Annual Report, February 1, 2012, p. 14.

[75] Nielsen, *State of the Media: The Social Media Report 2012*, December 4, 2012, p. 18, http://www.nielsen.com/content/dam/corporate/us/en/reports-downloads/2012-Reports/The-Social-Media-Report-2012.pdf.

[76] ESA, "2013 Essential Facts about the Computer and Video Game Industry," pp. 2-4, http://www.theesa.com/facts/pdfs/ESA_EF_2013.pdf.

[77] Paul Verna, *Gaming for Marketers: Let the Mobile Games Begin*, eMarketer, December 2012, p. 4.

[78] Accenture, *Multi-Tasking and Taking Control: Winning the Trust of the Sophisticated Consumer*, Video-Over-Internet Consumer Survey, April 5, 2013, p. 2, http://www.accenture.com/us-en/Pages/insight-acn-video-over-internet-consumer-survey-2013.aspx.

[79]Advertising Age, *The Viral Video Chart*, accessed July 29, 2013, http://adage.com/rss-feed?section_id=674.

[80] eMarketer, *Online Video Advertising Moves Front and Center*, May 14, 2013, http://www.emarketer.com/Article/Online-Video-Advertising-Moves-Front-Center/1009886.

Online Privacy

By browsing the web, blogging, joining social networks, and playing online games, consumers produce a large quantity of personal data. One way in which advertisers and marketing firms may use this information is to deliver higher-value ads targeted at consumers with identifiable interests.[81] The ever-growing trails of personal data being collected by commercial enterprises have raised concern among privacy advocates, who have urged legislation to give consumers greater control over what information websites collect and how that information is used.[82] Website owners and the advertising industry, on the other hand, worry that tougher privacy standards could make it more difficult to serve up targeted ads, harming one of the more lucrative aspects of online advertising.[83]

Behavioral Targeting

Contextual and behavioral advertising are two ways to place relevant information in front of a potential customer. The general idea behind contextual advertising is to generate ads expected to be of interest to an Internet user due to that user's recent online activity.[84] Because contextual advertising involves little or no data storage beyond the current online session, it raises few privacy concerns. Behavioral ads, in contrast, use past browsing behavior to target ads. A company collects information about websites and specific pages a consumer visits and uses that viewing history to make guesses on the consumer's interests; a consumer with a history of visiting cat forums, for example, might be likely to see ads for kitty litter. Such ads can command prices more than twice those of other forms of online advertising.[85]

The main mechanism for following consumers' online activity is tracking cookies, small text files that can store data. By design, cookies are largely invisible to consumers and are encrypted to be unintelligible to any user wanting to know what information they contain. Behavioral tracking and targeting can create highly detailed user profiles by combining a user's history of online activity with data derived offline.[86] Companies that collect and sell data gathered by cookies claim the data do not identify users by name, and that their activity is adequately disclosed in privacy policies.

[81] Omer Tene and Jules Polonetsky, *To Track or "Do Not Track": Advertising Transparency and Individual Control in Online Behavioral Advertising*, Future of Privacy Forum, August 31, 2011, p. 23, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1920505.

[82] ACLU, *Understanding the Risk*, March 16, 2011, https://www.aclu.org/technology-and-liberty/understanding-risk.

[83] For example, a 2010 study, *Empirical Research on the Economic Effects of Privacy Regulation*, by MIT economist Catherine Tucker, found that after Europe enacted privacy legislation the effectiveness of online ads dropped by about 65%.

[84] For example, if a user were to search for "Prada shoes" on Google and later visit any site within the Google Display Network, he or she might be served an ad from a luxury retailer. Google AdWords is one of the largest contextual advertising platforms, which consists of millions of websites that contain ads from Google.

[85] Howard Beales, *The Value of Behavioral Targeting*, Network Advertising Initiative, March 24, 2010, p. 3, http://ftc.gov/os/comments/privacyroundtable/544506-00117.pdf.

[86] For a broader discussion of cookies, see Catherine O'Neill, "e-Privacy & Data Protection: What If the Cookie Crumbles?," *Citi*, May 20, 2012, p. 7.

Separately, mobile devices use location-based services to track consumers' whereabouts. This allows advertisers to serve ads related to the user's current location. Device users may be able to turn off locational tracking, although this may reduce the functionality of their devices.

A 2012 survey by the Pew Research Center found that 68% of Americans did not like having their online behavior tracked and analyzed.[87] Among the concerns are that tracking can be used to take advantage of vulnerable consumers, particularly children, and that the information collected may be used inappropriately or might reveal the identity of a person.[88] A coalition of consumer groups has called for mandatory constraints on behavioral advertising.[89]

Behavioral tracking remains largely unregulated in the United States, although some researchers point to a strong domestic regime of corporate "privacy on the ground."[90] U.S. courts have ruled it is legal to deploy "first-party" cookies, or information collected by a company or an online publisher for its own use.[91] In contrast, more complex "third party" advertising cookies, placed by a party other than the site the user is currently visiting, raise questions about intrusive monitoring.[92] According to an analysis by Keynote Systems, which describes itself as an Internet and mobile cloud testing and monitoring company, 86% of 269 top websites across four industries placed one or more third-party tracking cookies on their visitors.[93] Common third-party advertising trackers include Google Adsense, DoubleClick, Quantcast, OpenX, Google AdWords Conversion, and Amazon Associates.[94]

The growing use and power of tracking technology have raised regulatory concerns. The FTC has already taken enforcement actions related to third-party web tracking against several companies, including Facebook and Google.[95] In March 2012, the FTC released a report recommending a "Do-Not-Track" registry to allow consumers to opt out of online tracking.[96] It noted that while

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87 Kristen Purcell, Joanna Brenner, and Lee Rainie, *Search Engine Use 2012*, Pew Research Center's Internet & American Life Project, March 9, 2012, p. 23, http://pewinternet.org/~/media//Files/Reports/2012/PIP_Search_Engine_Use_2012.pdf.

88 One study found that more than half of the websites it reviewed leaked sensitive and identifiable information to third-party aggregators. For a discussion of that study, see *Privacy Leakage vs. Protection Measures: The Growing Disconnect*, by researchers at the Worcester Polytechnic Institute, http://web.cs.wpi.edu/~cew/papers/w2sp11.pdf.

89 See, for example, Center for Democracy & Technology, *A Primer on Behavioral Advertising*, July 31, 2008, https://www.cdt.org/policy/primer-behavioral-advertising.

90 Christopher Wolf and Winston Maxwell write that "Chief Privacy Officers (CPOs) are proliferating and gaining in importance in U.S. businesses, adding to the level of American privacy protection." See *Antitrust*, "So Close, Yet So Far Apart: The EU and U.S. Visions of a New Privacy Framework," Summer 2012, p. 9, http://law.duke.edu/sites/default/files/images/centers/judicialstudies/Visions_New_Privacy_Framework.pdf.

91 Claude Castelluccia and Arvind Narayanan, *Privacy Considerations of Online Behavioral Tracking*, European Network and Information Security Agency, October 19, 2012, p. 17.

92 A third-party cookie, placed by an advertiser in partnership with the first party, could allow the advertiser to show the user an ad from an unrelated website and to track the user across the entire Internet.

93 Ellen Messmer, "Study: 86% of Top Websites Expose Visitors to Third-Party Tracking Cookies," *NetworkWorld*, June 28, 2012 http://www.networkworld.com/news/2012/062812-tracking-cookies-260544.html.

94 Ghostery, KnowYourElements, http://www.knowyourelements.com/#tab=list-view&date=2013-06-13.

95 For example, the FTC Facebook Consent Order requires Facebook to submit to third-party privacy audits until 2032, among other things. Likewise, Google's settlement with the FTC in 2011 includes a requirement that it submit to regular independent privacy audits for the next 20 years.

96 Federal Trade Commission, *Protecting Consumer Privacy in an Era of Rapid Change: Recommendations for Businesses and Policymakers*, March 2012, p. i, http://www.ftc.gov/os/2012/03/120326privacyreport.pdf.

many companies treat consumer information carefully, "some appear to treat it in an irresponsible or even reckless manner."[97]

Several web browsers have adopted "do not track" features, but some privacy experts question their effectiveness. When the feature is on—some browsers require the user to turn it on rather than making it the default setting—the browser sends a signal to websites that a user does not want to be tracked, so that any cookies placed by a website should collect only the bare minimum amount of information required to provide service. As of April 2013, Google reported that approximately 17% of its U.S. viewers using the Firefox browser had turned the "do not track" setting on.[98]

DAA's Advertising Option Icon

In the United States, a consortium of ad trade groups created the Digital Advertising Alliance's (DAA's) turquoise Advertising Option Icon in response to pressure from the FTC. Depicted in the adjacent box, the DAA icon may show up in or near online ads or on web pages where data are collected and used for behavioral advertising. After clicking on the icon, users find a disclosure statement on data collection, use practices associated with the ad, and a voluntary opt-out mechanism. Proponents view the DAA Icon as a means of assisting consumers with managing their online tracking profiles,[99] although skeptics maintain Ad Choice does not go far enough to inform people about what data are being collected from them and how they are being used.[100]

An international body, the World Wide Web Consortium (W3C), is attempting to come up with tracking standards that might apply worldwide. W3C is made up of computer scientists, consumer advocates, and dozens of companies like Microsoft and Google.[101] The group has not yet reached consensus on the technology or policy components related to consumer web tracking.

Policy Issues Affecting Digital Advertising

Congress has been involved in regulating advertising since at least 1914, when the Federal Trade Commission Act made unlawful "the dissemination or the causing to be disseminated of any false advertisement" that might affect commerce."[102] Among the motivations for federal legislation regarding advertising over the years have been ensuring fair competition; shielding consumers from unfair or misleading messages; limiting exposure of children to certain types of advertisements; and restricting promotion of products deemed morally or physically harmful.

[97] Ibid., Executive Summary.

[98] U.S. Congress, Senate Commerce, Science & Transportation, *A Status Update on Voluntary Do-Not-Track Standards*, 113th Cong., 1st sess., April 24, 2013, p. 5.

[99] See http://www.youradchoices.com/control.aspx.

[100] Jonathan Mayer, *Tracking the Trackers: The Adchoices Icon*, Center for Internet and Society, August 18, 2011, http://cyberlaw.stanford.edu/blog/2011/08/tracking-trackers-adchoices-icon.

[101] W3C's work on tracking compliance is described at http://www.w3.org/2011/tracking-protection/.

[102] 15 U.S.C. §52. Federal regulation of advertising in the United States is discussed in *Essentials of Contemporary Advertising*, by William F. Arens, David H. Schaefer, and Michael Weigold, 2008, pp. 41-53.

More recently, Congress, regulators, and the courts have turned their attention to digital advertising.[103] Several federal agencies are involved:

- The FTC, the principal federal agency responsible for regulating public advertisements in all media, is charged with protecting consumers from claims that are false, deceptive, or unfair.[104] Its authority covers both online and traditional advertising. The FTC Bureau of Consumer Protection enforces rules regarding online consumer privacy.[105] In recent years, the FTC has investigated several companies, including Sears, Myspace, and Google, for their online behavioral advertising practices.[106]
- The Food and Drug Administration (FDA) enforces the Federal Food Drug and Cosmetic Act (P.L. 75-717), which regulates food package labeling and health claims and consumer prescription drug advertising.[107] Its recent efforts include formulating policy on the marketing of prescription drugs and restricted medical devices through social media tools.[108]
- The Federal Communications Commission (FCC) regulates various issues affecting advertising on radio, television, telephone, satellite and cable television, and the Internet. The FCC is taking a fresh look at children and digital media.[109] The FCC also adopted a rule in 2012 that for the first time requires affiliates of the four major networks in the top 50 TV markets to post political ad buying information online.[110] All other stations will have to comply by July 1, 2014.[111]

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[103] For more information on Supreme Court regulation of commercial speech, see CRS Report 95-815, *Freedom of Speech and Press: Exceptions to the First Amendment*, by (name redacted). In 1976, the Supreme Court affirmatively extended First Amendment protection to commercial speech in Virginia Board of Pharmacy v. Virginia Citizens Consumer Council.

[104] Section 5 of the Federal Trade Commission Act (FTC Act), enacted in 1914, prohibits unfair or deceptive acts or practices in or affecting commerce (15 U.S.C. §45), which include true, and not misleading, advertising claims. It enforces truth-in-advertising laws, and applies the same standards no matter where an ad appears—in newspapers, magazines, online, in the mail, or on billboards or buses. The FTC closely examines advertising claims about food, over-the-counter drugs, dietary supplements, alcohol, and tobacco.

[105] In 2007, the FTC established the Division of Privacy and Identity Protection to protect online consumer privacy, ensure information security, and combat identity theft, http://www.ftc.gov/bcp/bcppip.shtm.

[106] For example, in 2009, the FTC charged that Sears violated the privacy of participants in its "My SHC Community Program" because that software let Sears track consumers' online behavior, and to some extent offline activities, and permitted access to some personally sensitive consumer data. Sears and the FTC settled, with Sears agreeing to take steps to better protect the privacy of its customers, including express opt-in consent and disclosure of the types of data tracked by any software program or application used by or on behalf of Sears. Additional legal actions by the FTC on behavioral advertising can be viewed at http://business.ftc.gov/legal-resources/48/35.

[107] Prescription drug ads must contain a truthful summary of information about a drug's effectiveness, side effects, and when its use should be avoided.

[108] By June 2014, the Food and Drug Safety and Innovation Act (P.L. 112-144) requires the FDA to release final guidance on the use of social media for prescription drugs and medical devices.

[109] FCC, "Implementation of the Child Safe Viewing Act: Examination of Parental Control Technologies for Video or Audio Programming," August 31, 2009, http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-09-69A1.pdf.

[110] Political ad data are public by law, but in the past TV stations were only required to keep paper files. FCC, *In the Matter of Standardized and Enhanced Disclosure Requirements for Television Broadcast Licensee Public Interest Obligations*, MM Docket No. 00-168, April 27, 2012.

[111] FCC, TV Station Profiles & Public Inspection Files, https://stations.fcc.gov/about-station-profiles/.

- The Consumer Financial Protection Bureau (CFPB), an independent agency created in 2011, oversees advertising of financial products to consumers.[112] Its Mortgage Acts and Practices Advertising rule, which took effect in August 2011, prohibits mortgage lenders and brokers from making misleading claims about mortgage products. The CFPB has launched formal investigations into six companies that it believes have violated the MAP Rule.[113]
- The Federal Election Commission (FEC) oversees political ads.[114]

A patchwork of state regulations also affects online advertising. Every state has consumer protection laws applying to ads running in that state, most often governed through state regulatory authorities and overseen by the state attorney general. An increasing number of states have passed laws affecting digital advertising. At least nine states, including California, Maryland, and New York, have introduced legislation on consumer or child online privacy.[115] For instance, California requires commercial websites to post a privacy policy to any website accessible by California residents. California also enacted the so-called "eraser law" that, beginning on January 1, 2015, allows minors to remove publicly posted content on social media sites such as Facebook and Twitter and prohibits online advertising of harmful products directed at minors, including the sale of firearms, alcohol, and tobacco.[116]

Industry Self-Regulation

The advertising industry has its own self-regulatory system organized through the Advertising Self-Regulatory Council (ASRC), formerly the National Advertising Review Council.[117] The ASRC aims to develop standards of "truth and accuracy" for national advertisers through a compliance system that includes recommendations for corrective actions and an internal appeals process.[118]

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[112] CFPB, "Buyer beware - Potentially deceptive mortgage ads are targeting veterans and older Americans," Holly Petraeus and Skip Humphrey, November 19, 2012, http://www.consumerfinance.gov/blog/buyer-beware-potentially-deceptive-mortgage-ads-are-targeting-veterans-and-older-americans/.

[113] CFPB, "Consumer Financial Protection Bureau Warns Companies Against Misleading Consumers with False Mortgage Advertisements," November 19, 2012, http://www.consumerfinance.gov/pressreleases/consumer-financial-protection-bureau-warns-companies-against-misleading-consumers-with-false-mortgage-advertisements/.

[114] All political advertising for federal elections must meet rules enforced by the FEC.

[115] Pam Greenberg, "Smartphones and apps are proliferating and getting smarter and smarter. Do they know too much?," *State Legislatures Magazine*, April 2013.

[116] Senate President pro Tem Darrell Steinberg, "Governor Signs Steinberg Bill Protecting Minors' Privacy on the Internet," press release, September 23, 2013, http://sd06.senate.ca.gov/news/2013-09-23-governor-signs-steinberg-bill-protecting-minors-privacy-internet.

[117] The ASRC includes the Association of National Advertisers (ANA), the American Association of Advertising Agencies (4A's), the American Advertising Federation (AAF), the Council of Better Business Bureaus (CBBB), the Direct Marketing Association (DMA), the Electronic Retailing Association (ERA), and the Interactive Advertising Bureau (IAB). ASRC, "The National Advertising Review Council is now the Advertising Self-Regulatory Council," press release, April 23, 2012, http://www.asrcreviews.org/2012/04/the-national-advertising-review-council-is-now-the-advertising-self-regulatory-council/.

[118] ASRC, *The Advertising Industry's Process of Voluntary Self-Regulation*, Policies and Procedures by the Advertising Self-Regulatory Council, September 24, 2012, http://www.asrcreviews.org/wp-content/uploads/2012/10/NAD-CARU-NARB-Procedures-Updated-10-9-12.pdf.

The ASRC also sets policies for the National Advertising Division of the Council of Better Business Bureaus and the Children's Advertising Review Union. These self-regulatory bodies look into specific complaints regarding possibly inaccurate product claims and more general questions about whether certain advertising is appropriate, particularly for children. Other initiatives promote healthier food and beverage choices in advertising targeted at children;[119] aim to improve consumer confidence in electronic advertising;[120] establish principles for online behavioral advertising;[121] and provide guidance for the mobile environment.[122] The IAB, founded in 1996, develops voluntary standards for online businesses and advertisers. The IAB is a coalition of more than 500 media and technology companies that sell nearly 90% of all U.S. online advertising.

One of the IAB's self-described goals is to fend off intrusive legislation. In that vein, it worked with other advertising organizations to craft voluntary guidelines for behavioral advertising, which were released in 2009.[123] The IAB also has set guidelines for advertising in social media and on mobile platforms. It has tried to standardize online advertising, issuing definitions for terms like "click" and "impression" as well as ad sizes and use of techniques such as pop-up ads.[124]

Concerns About Online Privacy

Even though many U.S. consumers are concerned about online privacy and many actively avoid companies they do not trust, only 38% of consumers claim to know how to limit information collected on them by a website, according to Pew Research.[125] Increasingly, regulators in the United States and Europe are scrutinizing the use and power of tracking technology. The European Union's approach to protecting privacy[126] includes comprehensive national laws, prohibitions against collection of data without a consumer's consent (the Cookie Directive),[127]

[119] In 2006, more than a dozen food companies launched a voluntary self-regulation program, the Children's Food and Beverage Advertising Initiative (CFBAI). New CFBAI-developed uniform nutrition criteria will go into effect in 2014 for child-directed food advertising. See the Better Business Bureau's CFBAI Category-Specific Uniform Nutrition Criteria, June 2013, http://www.bbb.org/us/storage/16/documents/cfbai/CFBAI%20Uniform%20Nutrition%20Criteria%20Fact%20Sheet%20-FINAL.pdf.

[120] Anything that has a direct link to the marketer: either a 1-800 number, e-mail, or website is within ERSP's purview.

[121] *Self-Regulatory Principles for Online Behavioral Advertising*, July 2009, http://www.aboutads.info/resource/download/seven-principles-07-01-09.pdf.

[122] DDA, *Applications of Self-Regulatory Principles to the Mobile Environment*, July 2013, http://www.aboutads.info/DAA_Mobile_Guidance.pdf.

[123] IAB, "Key Trade Groups Release Comprehensive Privacy Principles for Use and Collection of Behavioral Data in Online Advertising," press release, July 2, 2009, http://www.iab.net/about_the_iab/recent_press_releases/press_release_archive/press_release/pr-070209.

[124] IAB, http://www.iab.net/about_the_iab.

[125] Kristen Purcell, Joanna Brenner, and Lee Rainie, *Search Engine Use 2012*, Pew Research Center's Internet & American Life Project, March 9, 2012, p. 25, http://pewinternet.org/~/media/Files/Reports/2012/PIP_Search_Engine_Use_2012.pdf.

[126] In January 2012, the European Commission proposed draft legislation, the General Data Protection Regulation (GDPR), to overhaul privacy and data laws in the European Union. The GDPR would update the EU's existing data privacy rules, the 1995 Data Protection Directive (95/45/EC). It would also replace the many different national data protection and privacy laws with one European law. Any new legislation is unlikely to become effective before 2015.

[127] EU Directive 2009/136/EC mandates explicit user consent before cookies can be placed. By May 25, 2011, all EU member states were to be compliant, but the law has yet to be implemented in the same way across Europe. For an overview, see DLA Piper report, *How the EU Has Implemented the New Law on Cookies*, October 8, 2012.

and requirements that companies that process data register the activities with government authorities. So far, the U.S. approach has been more ad hoc and industry-based. These differences may raise significant compliance challenges for U.S. companies doing business in Europe—including those transacting with European nationals solely through the Internet without a physical presence in Europe.[128]

The FTC recommended a Do Not Track framework in 2012[129] and provided recommendations on privacy protections for mobile services in 2013.[130] To keep up with changing technology, the FTC amended its Children's Online Privacy Protection (COPPA) Rule[131] in 2012, strengthening its privacy protections to give greater control to parents over what information is collected online from children under 13.[132] Among the more significant changes, which took effect on July 1, 2013, the revised COPPA rule expanded the definition of the term "personal information" that operators of commercial websites and online services, including mobile apps, can collect from children and revised how companies obtain parental consent.[133] A 2012 FTC report discussed how mobile apps affect the privacy of children, which some observers believe could be a prelude to proposed regulation.[134] Besides privacy, the FTC updated its Dot.com disclosures for online advertising to give businesses examples and direction on how to avoid unfair or deceptive business practices in their online ads.[135]

In December 2010, the Department of Commerce Internet Policy Task Force released a green paper on commercial data privacy issues that recommended, for instance, the establishment of a Privacy Policy Office and a commercial data privacy framework for businesses.[136] That report did not endorse any privacy initiatives. Building on the Department of Commerce's work, the White House released its consumer data privacy framework in 2012, which also considers the issue of third-party personal data collection and how companies deliver targeted ads to consumers.[137]

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[128] Christopher Wolf and Winston Maxwell, *Antitrust*, "So Close, Yet So Far Apart: The EU and U.S. Visions of a New Privacy Framework," Summer 2012, p. 12.

[129] FTC, *Protecting Consumer Privacy in an Era of Rapid Change: Recommendations for Businesses and Policymakers*, March 26, 2012, http://www.ftc.gov/opa/2012/03/privacyframework.shtm.

[130] FTC, *FTC Staff Report Recommends Ways to Improve Mobile Privacy Disclosures*, February 1, 2013, http://www.ftc.gov/opa/2013/02/mobileprivacy.shtm.

[131] The FTC initiated a review of the COPPA Rule in 2010 to keep it current with changing technology, issuing final rule amendments that became effective on July 1, 2013. *Federal Register*, 16 C.F.R. Part 312, Children's Online Privacy Protection Rule; Final Rule, Vol. 78, No. 12, January 17, 2013, http://www.ftc.gov/os/fedreg/2013/01/130117coppa.pdf.

[132] FTC, "FTC Strengthens Kids' Privacy, Gives Parents Greater Control Over Their Information By Amending Children's Online Privacy Protection Rule," press release, December 19, 2012, http://www.ftc.gov/opa/2012/12/coppa.shtm.

[133] FTC, Bureau of Consumer Protection, *Complying with COPPA: Frequently Asked Questions*, "A Guide for Small Business and Parents and Small Entity Compliance Guide," July 2013, http://business.ftc.gov/documents/Complying-with-COPPA-Frequently-Asked-Questions.

[134] FTC, "FTC's Second Kids App Report Finds Little Progress in Addressing Privacy Concerns Surrounding Mobile Applications for Children," press release, December 10, 2012, http://www.ftc.gov/opa/2012/12/kidsapp.shtm. The FTC staff's first survey of kids' mobile apps was completed in 2011.

[135] FTC, *.com Disclosures: How to Make Effective Disclosures in Digital Advertising*, March 2013, http://business.ftc.gov/documents/bus41-dot-com-disclosures-information-about-online-advertising.

[136] Department of Commerce Internet Policy Task Force, *Commercial Data Privacy and Innovation in the Internet Economy: A Dynamic Policy Framework*, p. 5, http://www.ntia.doc.gov/reports/2010/IPTF_Privacy_GreenPaper_12162010.pdf.

[137] White House, *Consumer Data Privacy in a Networked World*, "A Framework for Protecting Privacy and Promoting (continued...)

Pending Legislation

In the 113th Congress, Do Not Track legislation was reintroduced by Senators Jay Rockefeller and Richard Blumenthal. The Do-Not-Track Online Act of 2013 (S. 418) was first introduced in 2011. If the bill is passed in its present form, companies would be required to honor user requests not to have online activities tracked, much the same as provided by the original 2011 bill. In April 2013, the Senate Commerce Committee held a hearing on the progress of industry self-regulation of online behavioral advertising.[138]

Senators Ron Wyden and Mark Kirk reintroduced geolocation privacy legislation (S. 639). That measure would prohibit the interception, disclosure, and use of geolocation information (information concerning the location of a wireless device) pertaining to another person.[139] In the House of Representatives, the Online Communications and Geolocation Protection Act (H.R. 983), reintroduced by Representatives Zoe Lofgren, Ted Poe, and Suzan DelBene, contains many of the same provisions.[140] Representative Joe Barton, who sponsored the Do Not Track Kids Act of 2011 (H.R. 1895) in the 112th Congress with then Representative Edward Markey, has said he plans to reintroduce the bill in the 113th Congress.[141] That act would prohibit the collection and use of minors' information for targeted marketing and strengthen privacy protection for children through, for instance, creating an eraser button for parents to delete information that companies gather about their children.

(...continued)

Innovation in the Global Digital Economy," February 2012.

[138] U.S. Senate Committee on Commerce, Science & Transportation, *A Status Update on the Development of Voluntary Do-Not-Track Standards*, April 24, 2013.

[139] Senator Ron Wyden, "Bipartisan Legislation Institutes Warrant Requirements to Track Americans with GPS Data," press release, March 21, 2013, http://www.wyden.senate.gov/news/press-releases/bipartisan-legislation-institutes-warrant-requirements-to-track-americans-with-gps-data.

[140] "DelBene co-sponsors bill with Rep. Lofgren to reform Electronic Communications Privacy Act," http://delbene.house.gov/press-release/delbene-co-sponsors-bill-rep-lofgren-reform-electronic-communications-privacy-act.

[141] Monica Desai, Benjamin Bartlett, Melanie Goggins, "Capital Thinking Blog," *Patton Boggs*, October 14, 2013, http://capitalthinking.pattonboggs.com/index.php/technology-and-communications-12/.

Appendix. Average Time Spent with Major Media

Table A-1. Share of Average Time Spent Per Day with Select Media by U.S. Adults Versus U.S. Ad Spending Share

	2009	2010	2011	2012
Time Spent Share				
TV[a]	42.2%	40.9%	40.4%	39.8%
Online[b]	23.1%	24.0%	24.6%	24.8%
Radio[c]	15.5%	14.9%	13.9%	13.2%
Mobile (nonvoice)	3.5%	5.3%	8.0%	11.7%
Print	8.7%	7.7%	6.5%	5.4%
Newspapers	5.2%	4.6%	3.8%	3.1%
Magazines	3.5%	3.1%	2.7%	2.3%
Ad Spending Share				
	2009	**2010**	**2011**	**2012**
TV	36.5%	38.4%	38.3%	38.9%
Online	15.2%	16.6%	19.3%	20.9%
Radio	9.7%	9.9%	9.6%	9.3%
Mobile (nonvoice)	0.3%	0.5%	0.9%	1.6%
Print	27.3%	24.7%	22.6%	20.7%
Newspapers	16.8%	14.8%	13.1%	11.5%
Magazines	10.5%	9.9%	9.6%	9.2%

Source: eMarketer, "*eMarketer: Consumers Spending More Time with Mobile as Growth Slows for Time Online*," October 22, 2012.

Notes: Time spent with each medium includes all time spent with that medium, regardless of multitasking; for example, one hour of multitasking on a PC while watching TV is counted as one hour for TV and one hour for online.

a. Includes live, DVR, and other prerecorded video, including video downloaded from the Internet but saved locally. TV ad spending includes broadcast TV (network, syndication, and spot) and cable TV.

b. All Internet activities on desktop and laptop computers and other nonmobile connected devices such as Internet-connected TVs.

c. Excludes online radio.

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