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Stop the Presses? Newspapers in the Digital Age

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SUMMARY

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During the last 20 years, more than 200 local daily newspapers have either reduced their publication frequency or ceased publishing altogether. Among those that survive, many employ a fraction of the journalists that they did at the turn of the 21st century, and publish far fewer original local and investigative news stories than they did previously. As a result, in order to get local news, thousands of U.S. communities rely on "ghost newspapers" that are shells of their former selves or, if they have internet service, on websites or chat groups that rarely employ full-time professional journalists. Among other societal effects, researchers report that the lack of a daily newspaper to monitor local governments and publicly traded companies and hold them accountable can lead to increased financing costs to make up for investors' lack of trust.

Daily newspaper revenue, adjusted for inflation, has fallen approximately 80% since it peaked at $89 billion in 2000. Several factors have led to the contraction of the newspaper industry, with the exception of large, national newspapers. Technological developments enabling citizens to access news without a subscription from websites and mobile apps have increased competition for readers. Revenue gains from online newspaper subscriptions have not replaced revenues lost as subscriptions to print newspapers decline. In addition, a large share of advertising that formerly appeared in newspapers has shifted to online platforms. Likewise, for local and regional newspapers, revenues from online editions of newspapers have not replaced revenues lost from print editions.

Business decisions by news aggregators such as Apple News and Google News and by social media platforms such as Facebook also affect the viability of newspapers. As intermediaries between newspapers and their readers, these online platforms can help increase newspapers' readership. However, they can also impede the ability of newspapers to sell subscriptions and collect data about their readers, which can be key to selling online advertising.

While some online platforms pay some newspapers for the right to distribute their articles, details about the agreements between online platforms and newspapers typically are not publicly available. Some news aggregators and social media platforms distribute "snippets" (i.e., small portions) of articles without the copyright owner's consent, claiming that they consider snippets to be "fair use" of publishers' content under the Copyright Act. In October 2021, the U.S. Copyright Office announced that, at the request of Congress, it is evaluating the effectiveness of current copyright protections for publishers in the United States. The report is due in May 2022.

Authorities in several jurisdictions, including the U.S. antitrust agencies, the United Kingdom, Australia, the European Union, and several state attorneys general, have alleged or are investigating allegations that online platforms have engaged in anticompetitive behavior in ways harmful to newspapers. Among other potential harms, the behavior could have potentially impeded the ability of newspaper publishers to maximize their revenues from online advertising and subscription sales. In August 2021, the Judicial Panel on Multidistrict Litigation consolidated 20 suits against Google, including one filed by the attorneys general of 16 states and the Commonwealth of Puerto Rico. These lawsuits allege Google's various roles in the advertising buying and selling process enabled it to inhibit competition and, among other effects, divert revenue from newspaper publishers.

Members of the 117th Congress have introduced several bills intended to support newspaper publishers by amending antitrust law to allow news content creators to negotiate jointly with online content distributors (H.R. 1735; S. 673); by limiting the reach of online platforms (H.R. 3825); and by providing tax credits for employing local news journalists (H.R. 5376). The Future of Local News Act of 2021 (H.R. 3169; S. 1601) would create the Future of Local News Committee to examine the state of local news and make recommendations related to the ability of local news to meet information needs. Other congressional actions could eventually result from the Copyright Office study and pending litigation.

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Introduction

Digital communication has made it easier for individuals to access a wide range of information, including news and upcoming events, from multiple sources. For example, information about an upcoming concert might be advertised in a local newspaper, posted on the performers' website, and shared on social media. This digital transformation has changed the consumption and production of news and reduced revenues at local newspapers.

Some Members of Congress have expressed concern about the decline of newspapers and have introduced bills to support newspapers and journalists. This report provides an overview of trends in the newspaper industry, discusses newspapers' relationships with online platforms,[1] and examines how the structure of online advertising affects newspapers' funding.

Changing Patterns of News Consumption

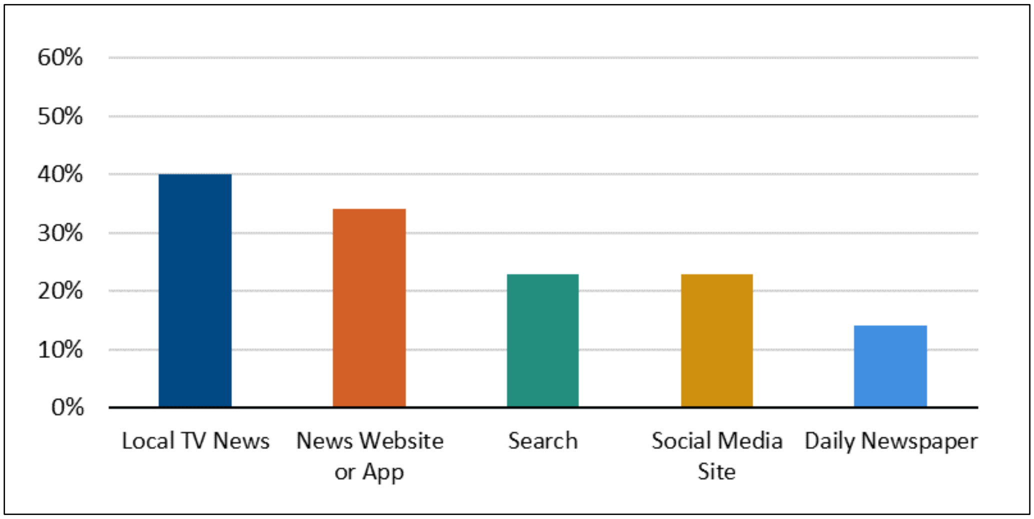
The majority of Americans get at least some of their news—including content from newspapers—from digital devices, according to a 2020 survey conducted by the Pew Research Center.[2] Among online news sources, most age-groups preferred news websites and apps, but respondents aged 18 to 29 listed social media platforms as their main source of news. In another 2020 survey, 14% of respondents cited daily printed newspapers as the principal medium from which they often get news, compared with 23% citing social media sites (e.g., Facebook), 23% citing search engines (e.g., Google), and 34% citing news websites or apps, including those operated by cable television networks and local broadcast stations (**Figure 1**).

[1] In this report, CRS uses the term "online platform" as defined by the Organisation for Economic Co-operation and Development (OECD): "a digital service that facilitates interactions between two or more distinct but interdependent sets of users (whether firms or individuals) who interact through the service via the internet." Examples include search engines, social media, and app stores. Jeremy West, *An Introduction to Online Platforms and Their Role in the Digital Transformation* (Paris: OECD, 2019), p. 20, at https://doi.org/10.1787/53e5f593-en.

[2] Elisa Shearer, "More Than Eight-in-Ten Americans Get News From Digital Devices," Pew Research Center, January 12, 2021, at https://www.pewresearch.org/fact-tank/2021/01/12/more-than-eight-in-ten-americans-get-news-from-digital-devices/. "Digital devices" refers to smartphones, computers, and tablets; Michael Barthel et al., "Measuring News Consumption in a Digital Era," Pew Research Center, December 8, 2020, at https://www.pewresearch.org/journalism/wp-content/uploads/sites/8/2020/12/PJ_2020.12.08_News-Consumption_FINAL.pdf.

Figure 1. News Consumption by Medium: 2020

Percentage of Respondents Who "Often" Get News from Each Media Platform



Source: Pew Research Center, "Journalism and Media: Datasets: American Trends Panel Wave 68," at https://www.journalism.org/?post_type=dataset. Pew 2020 News Measurement Study.

Note: Results based on self-reported responses to survey questions.

Digitization of News

Newspapers have been offering their articles online since at least January 1994, when the *Palo Alto Weekly* published the first online newspaper.[3] While some local print newspapers successfully made the transition to digital media, others struggled to adapt.[4]

Digital media has changed the way news is distributed. While daily print newspapers are released only at set times, online news content can be added and updated continuously throughout the day.[5] News content posted online can be produced and disseminated quickly; one study found that one-quarter of news content posted on one site would be posted on another site within four minutes.[6] News publishers that started in other forms of media, such as television broadcasting and radio, started offering their content online.[7] The emergence of digital-native newspapers[8]

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[3] Sacha Wunch-Vincent and Graham Vickery, *The Evolution of News and the Internet*, OECD Working Party on the Information Economy, Paris, June 11, 2010, p. 8, at https://www.oecd.org/sti/ieconomy/oecdexaminesthefutureofnewsandtheinternet.htm. (OECD June 2010 Report.)

[4] Damian Radcliffe and Christopher Ali, *Small-Market Newspapers in the Digital Age*, Tow Center for Journalism, Columbia University, New York, NY, November 15, 2017, at https://academiccommons.columbia.edu/doi/10.7916/D8WS95VQ.

[5] Bertin Martens et al., "The Digital Transformation of News Media and the Rise of Disinformation and Fake News," European Commission, Joint Research Centre Technical Report Working Paper 2018-02, April 2018, at https://ec.europa.eu/jrc/sites/default/files/jrc111529.pdf.

[6] Julia Cage, Nicolas Hervé, and Marie-Luce Viaud, "The Production of Information in an Online World," *Review of Economic Studies*, vol. 87, issue 5 (October 2020), pp. 2126-2164.

[7] For example, National Public Radio started as a network of public radio stations and Fox News started as a cable television news channel; both now publish content on their own websites and apps as well.

[8] This report uses the term "digital-native news publishers" to refer to news publishers that only offer their content online or those that started online; some may also be referred to as "online media companies" or other similar terms. Some of these publishers specialize in specific subject areas (e.g., *TechCrunch*, which focuses on the tech industry and

further increased the number of outlets providing news, some of which became substitutes for print newspapers.[9]

The digitization of news can affect local news coverage. Some news publishers may not have an incentive to report on all topics covered by local newspapers. Publishers may not have an incentive to conduct in-depth investigations of local affairs, which can be costly and time-consuming, if they are unlikely to increase the number of subscribers.[10] In addition, some newspapers have been able to attract readers from across the country by selling subscriptions to their digital products.[11] This can adversely affect smaller, local newspapers that lack the resources to create digital products, potentially affecting engagement with local issues.

Newspaper Revenue Trends

Traditionally, the primary revenue sources of daily print newspaper publishers have been print subscriptions and print advertising.

Daily newspaper revenue, adjusted for inflation, has fallen approximately 80% since it peaked at $89 billion in 2000. The share of newspaper publishers' revenue derived from online advertising, adjusted for inflation, has increased over the last 20 years, from 2.6% in 2004 ($2 billion out of a total of $46.2 billion in 2020 dollars) to 35.4% in 2020 ($3 billion out of a total of $9.3 billion). Thus, advertising revenues from newspapers' websites and apps have grown in importance, but not by enough to prevent a sharp overall decline in industry revenues.

The few daily newspapers with a national and/or international readership, such as the *New York Times*, the *Wall Street Journal*, *USA Today*, and the *Washington Post*, have experienced different advertising trends than those with a local or regional readership. As journalism professor Penelope Muse Abernathy wrote in a June 2020 report, national newspapers "have a journalistic mandate and a business model, which rely on scale and reach, that are very different from that of either the state and metro papers or smaller community papers."[12] This scale and reach enable the national papers to attract national advertisers in addition to local advertisers, and thereby generate more online advertising revenue than their local counterparts.[13] In addition, as described below,

start-up companies), while others provide broader coverage of national events (e.g., *Business Insider*, *HuffPost*, and *Breitbart*).

[9] Matthew Gentzkow, "Valuing New Goods in a Model with Complementarity: Online Newspapers," *American Economic Review*, vol. 97, no. 3 (2007), pp. 713-744; John Dimmick, Yan Chen, and Zhan Li, "Competition Between the Internet and Traditional News Media: The Gratification-Opportunities Niche Dimension," *Journal of Media Economics*, vol. 17, no. 1 (2004), pp. 19-33.

[10] Stigler Committee on Digital Platforms, "Final Report: News Industry Subcommittee Report," Chicago Booth Stigler Center, 2019, at https://research.chicagobooth.edu/stigler/media/news/committee-on-digital-platforms-final-report, pp. 139-205; Bertin Martens et al., "The Digital Transformation of News Media and the Rise of Disinformation and Fake News," European Commission, Joint Research Centre Technical Report Working Paper 2018-02, April 2018, at https://ec.europa.eu/jrc/sites/default/files/jrc111529.pdf.

[11] For example, see Lisa George and Joel Waldfogel, "The *New York Times* and the Market for Local Newspapers," *American Economic Review*, vol. 96, no. 1 (2006), pp. 435-447.

[12] Penelope Abernathy, *News Deserts and Ghost Newspapers: Will Local News Survive?*, Center for Innovation and Sustainability in Local Media, University of North Carolina at Chapel Hill, June 2020, p. 13, at https://www.usnewsdeserts.com/reports/news-deserts-and-ghost-newspapers-will-local-news-survive/ (Abernathy June 2020 Report). The New York Times Company 2020 Annual Report, p. 4 (NYT 2020 Annual Report).

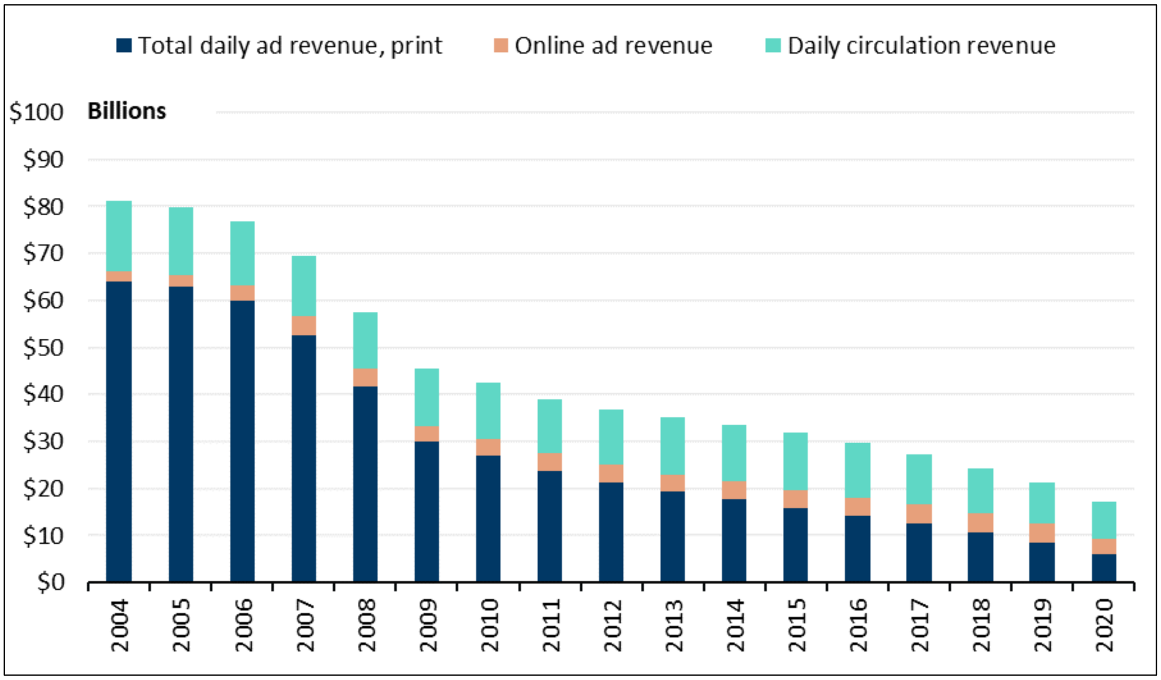
[13] According to Thomas Hunter, chairman and CEO of group newspaper owner McClatchy, national advertisers, in order to reach readers nationwide, prefer to negotiate a "seamless and turnkey" arrangement, rather than engage in multiple negotiations with various local newspaper publishers. Sarah Fischer, "Gannett, McClatchy Team Up to Sell Ads," *Axios*, February 15, 2021, at https://www.axios.com/gannett-mcclatchy-advertising-sales-local-f87fa8db-cc60-

large publishers are less reliant on advertising technology intermediaries such as Google,[14] and are therefore able to retain a greater share of online advertising revenues than small publishers.

In 2020, for example, the *New York Times* generated approximately 58% of its advertising revenue from online advertising.[15] In contrast, for three leading publishers of local daily newspapers, Lee Enterprises Inc., DallasNews Corp., and Tribune Publishing Company, the proportions of total advertising revenue generated by online advertising in 2020 were 36.8%,[16] 35.9%,[17] and 27%,[18] respectively.

Figure 2. Sources of Daily Newspaper Industry Revenue

Figures in $ Billions, Adjusted for Inflation in 2020 Dollars



Source: CRS analysis of data from S&P Global Market Intelligence. Inflation adjustment based on Bureau of Labor Statistics Consumer Price Index for All Urban Consumers.

Notes: Advertising revenue includes both national and local advertising. In nominal terms, newspaper publishers generated $48.2 billion in 2004.

4bf6-9ea4-a8b033d6aa52.html.

[14] In 2015, Google reorganized and formed a new parent organization, Alphabet. Alphabet's core businesses, including search and advertising, operate under the umbrella of the Google brand. See "Larry's Alphabet Letter," Founders' Letters (blog), August 10, 2015, at https://abc.xyz/investor/founders-letters/2015/. See also Google, "About," at https://about.google/.

[15] New York Times Company, SEC Form 10-K for the fiscal year ended December 27, 2020, p. 3. (NYT 2020 SEC Form10-K).

[16] Lee Enterprises Inc., SEC Form 10-K for the fiscal year ended September 27, 2020, p. 20. (Lee 2020 SEC Form 10-K.)

[17] A.H. Belo Corporation, SEC Form 10-K for the fiscal year ended December 31, 2020, p. 13 (DallasNews 2020 SEC Form 10-K). In June 2021, the company changed its name from A.H. Belo Corporation to DallasNews Corporation.

[18] Tribune Publishing Company, SEC Form 10-K, p. F-21 (Tribune SEC Form 10-K). Tribune ceased to be a publicly traded company in 2021, when hedge firm Alden Global Capital purchased the company.

Online Competition for Local Advertising

The internet transformed the local advertising market for newspapers, unleashing competition from online platforms and websites. The launch of the free online classified advertising website Craigslist in 1996[19] coincided with the falloff in newspapers' revenue from print classified advertising. In addition, some newspaper publishers themselves invested in online classified services such as Cars.com, Apartments.com, Autotrader.com, and CareerBuilder, which siphoned off classified advertising from newspapers.[20]

In 2000, print newspapers generated 40% of their local advertising, or $19.6 billion, from classified ads. In 2020, print classified advertising generated only 15% of total advertising revenue, or $1.4 billion.[21]

Likewise, display advertisers, such as retailers and consumer products manufacturers, shifted their budgets from print newspapers to online platforms and websites as the internet enabled them to target potential customers in new ways.[22] Newspapers typically offer the same advertisement to all print readers. In contrast, online platforms, particularly Google and Facebook, can target ads precisely to potential consumers based on the platforms' access to data about individuals.[23]

According to estimates from research firms Borrell Associates and eMarketer, as of 2019, Google and Facebook collectively received 77% of online advertising revenue in local markets.[24] In particular, these two companies benefited from a self-reinforcing cycle of attracting users and advertisers. The more users they attract, the more data they can collect, and the easier it is to target the users with advertisements, thereby enabling them to maintain a competitive advantage vis-à-vis other online media outlets in generating advertising revenues.

As **Figure 3** illustrates, printed daily newspapers' share of overall local advertising[25] spending plummeted, from 48% of $109 billion in total local advertising spending in 2004 (in 2020 dollars) to 5% of the $95 billion in total local advertising spending in 2020. In contrast, the share of local advertising spending captured by online media—which, as shown in **Figure 3** includes advertising revenue from all websites and apps (including newspaper websites and apps)—skyrocketed from 3% in 2004 to 63% in 2020. Thus, while newspaper publishers rely on online platforms to reach readers and advertisers, the publishers also compete with those platforms, either directly or indirectly, for access to their readers' data and revenues from local advertisers seeking to utilize those data.

[19] Beth Daley, "Craigslist Turns 25—a Reminder That a More Democratic Version of the Internet Can Still Thrive," *The Conversation*, February 19, 2020, at https://theconversation.com/craigslist-turns-25-a-reminder-that-a-more-democratic-version-of-the-internet-can-still-thrive-129875. Craigslist began as an e-mail listserv in 1995.

[20] Craig Shafer, "Don't Blame Craigslist for the Decline of Newspapers," *Politico*, December 13, 2016, at https://www.politico.com/magazine/story/2016/12/craigslist-newspapers-decline-classifieds-214525/.

[21] CRS analysis of data from S&P Global Market Intelligence. Figures not adjusted for inflation.

[22] Display advertisements are "displayed" alongside editorial content. They often contain graphics or other artwork to promote products and/or services.

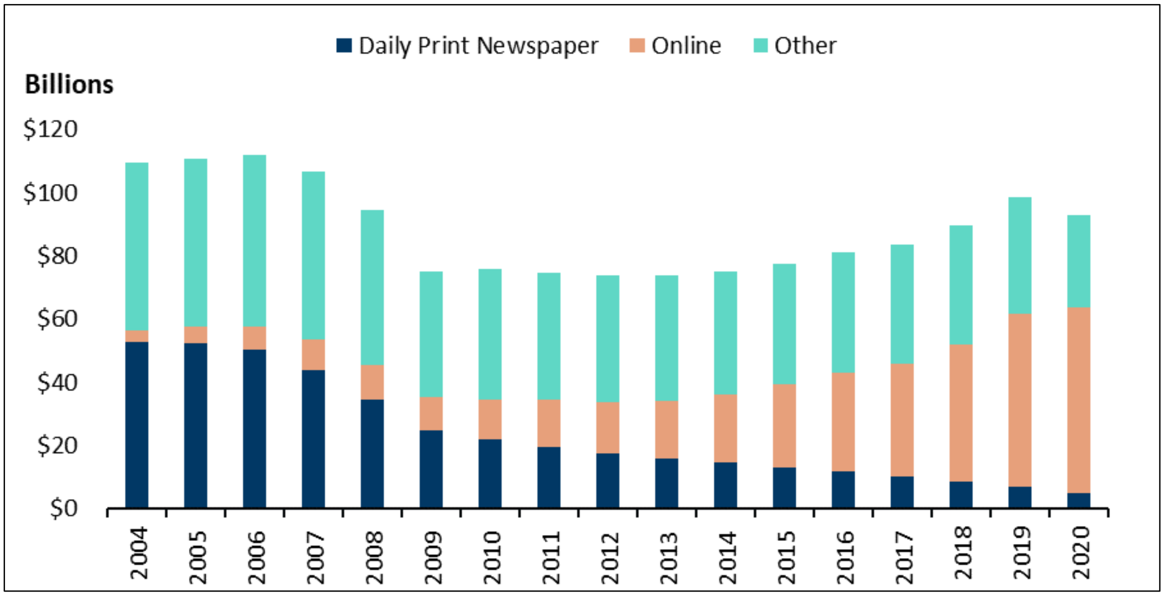
[23] "Digital Versus Traditional Marketing: What Today's C-Suite Needs to Know," Wharton Online (blog), University of Pennsylvania, July 17, 2019, at https://online.wharton.upenn.edu/blog/digital-versus-traditional-marketing/.

[24] Keach Hagey, Lukas I. Alpert, and Yaryna Serkez, "In the News Industry, a Stark Divide Between the Haves and Have-Nots," *Wall Street Journal*, May 4, 2019, at https://www.wsj.com/graphics/local-newspapers-stark-divide/.

[25] "Local advertising" refers to the way in which advertising is purchased/sold. Local advertising is purchased/sold on a per-market basis; national advertising is sold across the entire country. E-mail dated December 2, 2021, from S&P Global Market Intelligence to CRS.

Figure 3. Local Advertising Revenue Shares by Medium

Figures in $ Billions, Adjust for Inflation in 2020 Dollars



Source: CRS analysis of data from S&P Global Market Intelligence and Bureau of Labor Statistics Consumer Price Index for All Urban Consumers.

Notes: Here, "Online" includes advertising revenues generated by advertising over the internet and over mobile, including the websites and mobile apps of daily newspapers. "Other" includes advertising revenues generated by broadcast television stations, regional cable (sports) networks, cable and satellite operators, newspapers/shoppers distributed weekly, yellow pages, and outdoor/out-of-home advertising.

Effects of Revenue Declines

The decline in industry revenue (even without adjusting for inflation) has contributed to the closure of hundreds of newspapers and reductions in publication frequencies for others, and/or staff layoffs. According to one count, between 2004 and 2020, 71 daily newspapers in the United States ceased publication, including many in economically troubled communities where advertisers were struggling and readers could no longer afford subscriptions.[26] During that same period, more than 100 daily newspapers reduced their publication frequency to less than seven days per week.[27] The widespread economic and social impact of the Coronavirus Disease 2019 (COVID-19) pandemic in 2020 led to a further decline in the number of daily newspapers, as advertisers cut back spending.[28] In July 2020, Wyoming became the first state without a daily printed newspaper on Monday mornings.[29]

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[26] Abernathy June 2020 Report, p. 15.

[27] Christine Schmidt, "How Publishers Are Cutting Print Days—and Not Losing Too Many Subscribers," Nieman Lab, August 28, 2019, at https://www.niemanlab.org/2019/08/how-publishers-are-cutting-print-days-and-not-losing-too-many-subscribers/.

[28] Erika Bolstad, "COVID-19 Is Crushing Newspapers, Worsening Hunger for Accurate Information," Pew Charitable Trusts, September 8, 2020, at https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2020/09/08/covid-19-is-crushing-newspapers-worsening-hunger-for-accurate-information.

[29] Joshua Benton, "Want to Read a Local Newspaper on a Monday Morning in Wyoming? The Last One Printing Is About to Stop," Nieman Lab, July 15, 2020, at https://www.niemanlab.org/2020/07/want-to-read-a-local-newspaper-on-a-monday-morning-in-wyoming-the-last-one-still-printing-is-about-to-stop.

Meanwhile, ownership of the surviving newspapers has become more concentrated. From 2004 to 2020, the percentage of daily newspapers owned by the 25 largest newspaper publishers grew from less than a third of the 1,472 dailies (including newspapers that have since decreased their publication frequency to weekly as well as those that since ceased publication) to more than to 70% of the 1,260 dailies.[30] The new owners, in many cases private equity firms, hedge funds, or other investment groups, took on debt to acquire the newspapers, and promised investors that they would earn a return on their investments by cutting costs.[31] In some instances, such cost cutting has involved selling real estate and equipment and laying off employees.[32]

From 2004 to 2020, the total number of employees at newspapers declined from about 397,500 to 120,000 (**Figure 4**). These figures include people working at newspaper websites. Meanwhile, the total number of employees working for "Internet publishing and broadcasting and search portals," the best proxy for online-only publishers, rose from about 66,100 to 290,200.[33] Thus, while online-only publishers have siphoned off advertising revenue from newspapers, they employ far fewer journalists.

The Bureau of Labor Statistics estimates that of the 46,700 news analysts, reporters, and journalists employed nationwide in 2020, about 13,800 (29.6%) were employed by newspaper publishers, roughly the same number employed by television broadcasters. About 6,100 (or 13.2%) were self-employed, and about 4,900 (or 10.6%) were employed by other online-only publishers.[34] Thus, despite their declining revenues, newspaper publishers continue to employ more people within this job category than their online counterparts.

[30] Abernathy June 2020 Report, pp. 34-35.

[31] Anna Nicolau and James Fontanella-Khan, "The Fight for the Future of America's Local Newspapers," *Financial Times*, January 21, 2021, at https://www.ft.com/content/5c22075c-f1af-431d-bf39-becf9c54758b.

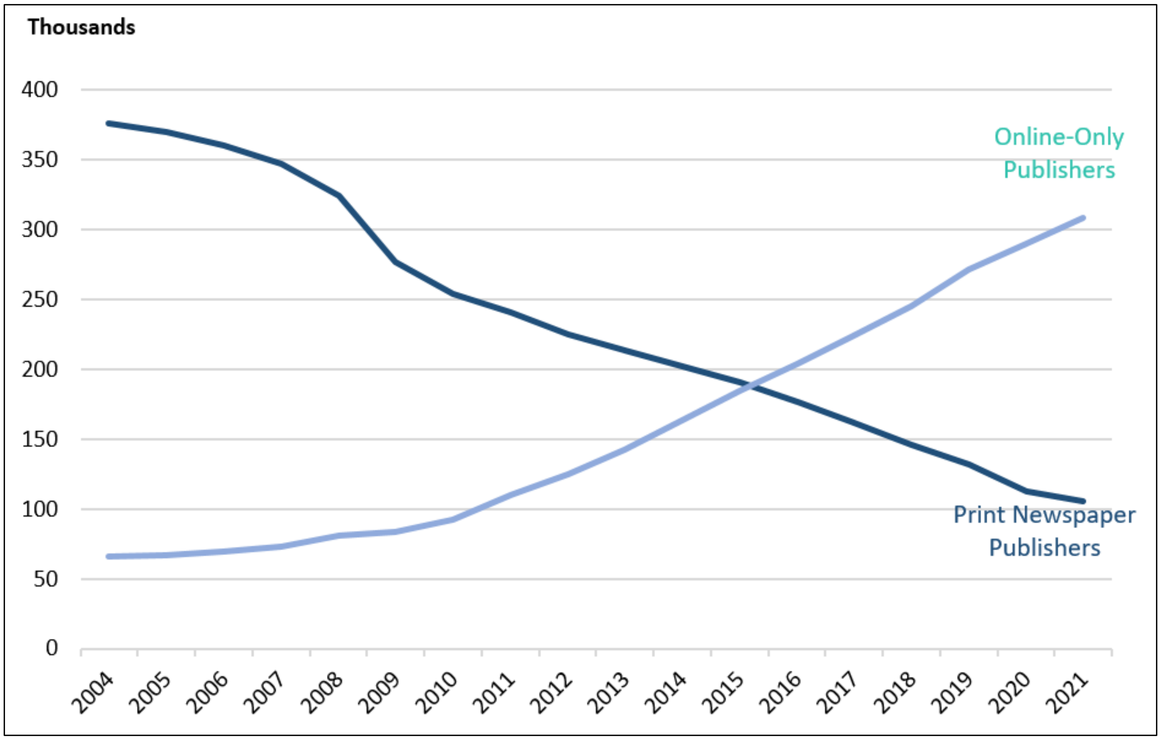
[32] McKay Coppins, "A Secretive Hedge Fund Is Gutting Newsrooms," *The Atlantic*, October 14, 2021, at https://www.theatlantic.com/magazine/archive/2021/11/alden-global-capital-killing-americas-newspapers/620171/.

[33] Bureau of Labor Statistics, Current Employment Statistics, employment for NAICS code 51913, at https://www.bls.gov/ces/data/.

[34] U.S. Bureau of Labor Statistics, "Data Tools; Employment Projections; National Employment Matrix; 27-3023 News Analysts, Reporters, and Journalists; Employment by Industry, Occupation, and Percent Distribution, 2020 and Projected 2030," at https://data.bls.gov/projections/nationalMatrix?queryParams=27-3023&ioType=o.

Figure 4. Newspaper and Online-Only Publishing Employment Trends

Average Monthly Employment



Source: Bureau of Labor Statistics; "Current Employment Statistics National Databases, Multiscreen, Information (NACIS Code 50); All Employees, Thousands; Newspaper Publishers (NAICS Code 51111) and Internet Publishing and Broadcasting and Web Search Portals (NAICS Code 51913); from years 2004–2021, including monthly averages," at https://www.bls.gov/ces/data/.

Notes: Figures not seasonally adjusted. 2021 data are employment averages of figures from January–November.

Researchers have found evidence that local newspaper closures and/or employee layoffs can increase the financing costs of both local governments and private corporations. A study published in 2020 found that because "local newspapers hold their governments accountable, keeping municipal borrowing costs low and ultimately saving local taxpayers money," closures can "have a significantly adverse impact on municipal borrowing costs in the long run."[35] Likewise, a study published in 2021 found that newspapers play an important role in enabling shareholders to monitor monitoring publicly traded firms.[36]

[35] Pengjie Gao, Chang Lee, and Dermot Murphy, "Financing Dies in Darkness? The Impact of Newspaper Closures on Public Finance," *Journal of Financial Economics*, vol. 135, no. 2 (2020), p. 445.

[36] Min Kim, Derrald Stice, Han Stice, and Roger M. White, "Stop the Presses! Or Wait, We Might Need Them: Firm Responses to Local Newspaper Closures and Layoffs," *Journal of Corporate Finance*, v. 69 (2021), p. 102035, at https://www.sciencedirect.com/science/article/pii/S0929119921001577?via%3Dihub.

Newspaper Publishers' Relationship with Online Platforms

Some online platforms allow consumers to access news articles, or portions of news articles, without a direct subscription to the newspaper. This section discusses how two types of online platforms—news aggregators and social media platforms—can both benefit and harm local newspapers.[37]

News Aggregators

News aggregators[38] curate content from various news publishers, including local and digital-native newspapers; some aggregators also publish original content.[39] Aggregators rely on online advertising and subscriptions for their revenue.[40] They bundle articles and display them in a particular order, often using proprietary algorithms that weigh factors such as relevance, freshness, and authoritativeness of the content.[41] Details about each aggregator's ranking process, such as the weight given to each factor used to prioritize certain news articles, are not publicly available.

Some newspapers have attracted readers by working with aggregators, particularly popular ones.[42] Limiting aggregators' access to a newspaper's content can reduce overall news consumption, including on the newspaper publisher's own online platforms.[43] However, aggregators can also make it difficult for newspaper publishers to create direct relationships with their readers, potentially resulting in newspapers having fewer subscribers and limited data about their readers.[44] In addition, the visibility of each publisher's content depends on the aggregator. Newspaper editors may have little or no control over the visibility of articles on an aggregator's

[37] Although this report focuses on news aggregators and social media platforms, some of these issues may be applicable to other online platforms as well.

[38] Examples include Google News, Apple News, SmartNews, and Drudge Report.

[39] For example, Yahoo News publishes original content; see https://news.yahoo.com/originals/.

[40] For example, Google News and SmartNews obtain their revenue from online advertising, while Apple News+ is subscription-based.

[41] For example, Apple presents content selected by editors under "Top Stories" and content selected by its algorithms under "Trending Stories" on its Apple News feed, while Google uses only algorithms to rank content in its Google News feed; see Apple, "See News Stories Chosen Just for You on iPhone," Apple iPhone User Guide, accessed on September 21, 2021, at https://support.apple.com/guide/iphone/see-news-stories-chosen-just-for-you-iph5b557ed3d/ios; Google, "Surfacing Useful and Relevant Content," Google News Initiative, accessed on September 21, 2021, at https://newsinitiative.withgoogle.com/hownewsworks/approach/surfacing-useful-and-relevant-content/.

[42] For example, Robert Thomson, CEO of News Corporation, the publisher of the *Wall Street Journal*, stated that the "Apple News partnership allows us to ... bring in a significantly new audience that we would hope to graduate to a paid *WSJ* subscription over time." See "Q4 2020 News Corp. Earnings Call—Final," CQ-Roll Call, Inc., August 6, 2020.

[43] Susan Athey, Mark Mobius, and Jeno Pal, "The Impact of Aggregators on Internet News Consumption," National Bureau of Economic Research, Working Paper No. 28746, April 2021, at http://www.nber.org/papers/w28746; Lesley Chiou and Catherine Tucker, "Content Aggregation by Platforms: The Case of the News Media," *Journal of Economics and Management Strategy*, vol. 26, issue 4 (2017), pp. 782-805, at https://doi.org/10.1111/jems.12207; Joan Calzada and Ricard Gil, "What Do News Aggregators Do? Evidence from Google News in Spain and Germany," *Marketing Science*, vol. 39, issue 1 (2020), pp. 134-167, at https://doi.org/10.1287/mksc.2019.1150.

[44] For example, this was the reason the *New York Times* stopped partnering with Apple News; see Kellen Browning and Jack Nicas, "The New York Times Pulls Out of Apple News," *New York Times*, June 29, 2020, at https://www.nytimes.com/2020/06/29/technology/new-york-times-apple-news-app.html.

website,[45] and may be tempted to focus on content that they expect to be ranked higher by aggregators' algorithms in an attempt to obtain a more prominent position on aggregators' platforms.[46]

Some aggregators have created sections dedicated to local news.[47] One study found that after Google News was redesigned to place links to geo-targeted local news content on its Home Page, local news consumption among heavy Google News users rose by 25%, with no evidence that consumers were visiting Google News rather than directly visiting the publishers' platforms.[48] However, some aggregators' algorithms may give lower rankings to content from local newspapers than to content from national newspapers,[49] displaying local newspapers' content less prominently.

Specific terms of each publisher's agreement with an aggregator typically are not publicly available. Although some aggregators provide information on the amount of revenue they provide publishers,[50] oftentimes details about an agreement between a specific publisher and aggregator are available only from news articles by individuals familiar with the negotiations.[51] Popular newspapers with a large customer base may be able to negotiate more favorable terms with aggregators and receive a larger share of revenue than smaller newspapers.

Some news aggregators may be able to leverage greater bargaining power over newspaper publishers through their parent company's other products and services. For example, Microsoft integrates its news aggregator in its browsers,[52] and Apple preinstalls Apple News on its mobile

[45] For example, newspaper editors can increase the visibility of an article in a print publication by placing it on the front page.

[46] Stigler Committee on Digital Platforms, "Final Report: News Industry Subcommittee Report," Chicago Booth Stigler Center, 2019, at https://research.chicagobooth.edu/stigler/media/news/committee-on-digital-platforms-final-report, pp. 139-205; Bertin Martens et al., "The Digital Transformation of News Media and the Rise of Disinformation and Fake News," European Commission, Joint Research Centre Technical Report Working Paper 2018-02, April 2018, at https://ec.europa.eu/jrc/sites/default/files/jrc111529.pdf; Susan Athey, Mark Mobius, and Jeno Pal, "The Impact of Aggregators on Internet News Consumption," *NBER Working Paper No. 28746*, April 2021, at http://www.nber.org/papers/w28746.

[47] For example, Google News has a section dedicated to local news, where users can prioritize content from specific cities and zip codes, and SmartNews allows users to search for news in select cities.

[48] Lisa George and Christiaan Hogendorn, "Local News Online: Aggregators, Geo-Targeting, and the Market for Local News," *Journal of Industrial Economics*, vol. 68, issue 4 (December 2020), pp. 780-818.

[49] Sean Fischer, Kokil Jaidka, and Yphtach Lelkes, "Auditing Local News Presence on Google News," *Nature Human Behavior*, vol. 4 (December 2020), pp. 1236-1244, at https://doi.org/10.1038/s41562-020-00954-0.

[50] For example, according to Apple News, publishers keep all of the advertising revenue generated from ads sold by the publisher and 70% of the revenue from ads sold by Apple. In October 2020, Google stated that it would spend $1 billion investing in partnerships with newspaper publishers in a new platform, Google News Showcase. Google stated that it had signed partnerships with nearly 200 leading publications across Germany, Brazil, Argentina, Canada, the United Kingdom, and Australia. However, it is unclear whether or when this would expand to U.S. publishers. Apple, "Publishing on Apple News," Apple Developer, accessed on November 17, 2021, at https://developer.apple.com/news-publisher/; Sundar Pichai, "Our $1 Billion Investment in Partnerships with News Publishers," Google Blog, October 1, 2020, at https://blog.google/outreach-initiatives/google-news-initiative/google-news-showcase/.

[51] For example, Apple was reportedly seeking to take 50% of the revenue generated through Apple News+, the subscription-based version of Apple News that provides additional content, and a Google spokesman stated that publishers received over 70% of the ad revenue when they use Google tools to monetize their content. Lukas Alpert, "Facebook Chief Mark Zuckerberg Urges Tech Rivals to Pay for News," *Wall Street Journal*, October 25, 2019, at https://www.wsj.com/articles/facebook-launches-news-service-for-select-users-11571997601; Apple, "Apple News+," accessed on January 14, 2022, at https://www.apple.com/apple-news/.

[52] Microsoft recently launched a news aggregator, Microsoft Start, to replace Microsoft News. It also started replacing its web browser Internet Explorer with Microsoft Edge. The news aggregators were and will continue to be integrated with the web browsers. Sarah Perez, "Microsoft Launches A Personalized News Service, Microsoft Start,"

devices and tablets.[53] Other firms operate news aggregators alongside online platforms that offer services that some newspaper publishers may rely on, such as search engines and advertising tools. News aggregators integrated with other platforms or devices may be convenient for some publishers and consumers, but they could also make it difficult for other news aggregators that do not operate similar access points to compete, increasing the market power of these integrated aggregators.

Although the Copyright Act generally prohibits aggregators and other online platforms from distributing full articles without the express consent of the copyright owner (usually the publisher),[54] the extent of these legal protections is not always clear.[55] For example, Google News provides snippets of news articles on its Home Page and in search results.[56] While Google considers this "fair use" of publishers' content,[57] newspapers have claimed that the Copyright Act does not provide a clear-cut standard to determine what constitutes "fair use."[58] One study found that when an aggregator displayed more information about a news article, such as longer snippets or accompanying images, readers were less likely to click through to the original article on the publisher's platform.[59] However, the same study also found that when there were several related articles, more information about an article increased the probability that readers would choose it over the other articles.

In May 2021, Members of the Senate Committee on the Judiciary sent a letter to the Register of Copyrights requesting a study of protections for publishers under copyright law to be completed no later than May 3, 2022. The study would "assist [them] as they consider what legislative reforms, if any, should be taken in this area of copyright law."[60] In October 2021, the U.S. Copyright Office announced that that it would conduct "a public study to evaluate the effectiveness of current copyright protections for publishers in the United States, with a focus on

TechCrunch, September 7, 2021, at https://techcrunch.com/2021/09/07/microsoft-launches-a-personalized-news-service-microsoft-start/; Sean Lyndersay, "The Future of Internet Explorer on Windows 10 is in Microsoft Edge,"Windows Blog, May 19, 2021, at https://blogs.windows.com/windowsexperience/2021/05/19/the-future-of-internet-explorer-on-windows-10-is-in-microsoft-edge/.

53 Apple, "iPad & iPhone," App Store Preview, accessed on October 19, 2021, at https://apps.apple.com/us/developer/apple/id284417353?mt=12#see-all/i-phonei-pad-apps.

54 17 U.S.C. §106(3).

55 In addition to copyright laws, news aggregators that do not publish original content may also receive federal immunity from liability for information provided by a third party (e.g., the news publisher) under Section 230 of the Communications Act of 1934. For more information, see CRS Report R46751, *Section 230: An Overview*, by Valerie C. Brannon and Eric N. Holmes.

56 Google, "Best Practices for Your Article Pages," Google Publisher Center Help, at https://support.google.com/news/publisher-center/answer/9607104?hl=en.

57 Richard Gingras, "Setting the Record Straight on News," Google News Initiative Blog, June 26, 2020, at https://blog.google/outreach-initiatives/google-news-initiative/setting-record-straight-news/.

58 Johannes Munter, "Fairer Fair Use," News Media Alliance, February 27, 2021 at https://www.newsmediaalliance.org/fairer-fair-use/.

59 Chrysanthos Dellarocas et al., "Attention Allocation in Information-Rich Environments: The Case of News Aggregators," *Management Science*, vol. 62, no. 9 (September 2016), pp. 2457-2764, at https://doi.org/10.1287/mnsc.2015.2237.

60 Letter from Senators Thom Tillis, Patrick Leahy, John Cornyn, Mazie Hirono, Amy Klobuchar, and Christopher Coons to Shira Perlmutter, Register of Copyrights, U.S. Copyright Office, May 3, 2021, at https://www.copyright.gov/policy/publishersprotections/letter-to-the-copyright-office.pdf.

press publishers."[61] Governments in other countries have also introduced legislation to address this issue.[62]

Social Media Platforms

Social media platforms distribute newspapers' content in a variety of ways.[63] Newspapers can create their own social media accounts, individual reporters can post information, and other users can also post and share links to newspaper articles. In these cases, content from newspapers is intermixed with content from other sources. Some social media platforms have created sections of their platforms that provide news articles only from selected newspapers, including local ones.[64]

As with news aggregators, social media platforms can increase the visibility of some newspaper articles while diminishing it for others. These platforms have an incentive to amplify publishers' content that they expect to increase user engagement to increase their revenue from online advertising.[65] Some social media platforms "recommend" content, which can include newspaper content that increases user engagement, even if nobody in the user's network directly shares the article. One study found that social media platforms can increase online news consumption,[66] potentially reducing the amount of time readers spend on news publishers' platforms. Nevertheless, it is unclear whether newspaper publishers would benefit if social media platforms did not include news content.[67] Some social media platforms have developed technologies that

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[61] U.S. Copyright Office, "Study on Ancillary Copyright Protections for Publishers," at https://www.copyright.gov/policy/publishersprotections/; U.S. Copyright Office, Library of Congress, "Publishers' Protections Study: Notice and Request for Public Comment," 86 *Federal Register* 59721, October 12, 2021.

[62] For example, Australia's parliament passed legislation establishing a code of conduct for negotiations between news publishers and online platforms. Facebook and Google initially stated the bill would be unworkable, but subsequently reached agreements with publishers. See Parliament of Australia, Treasury Law Amendment (News Media and Digital Platforms Mandatory Bargaining Code) Bill 2021, February 25, 2021, at https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22legislation%2Fbillhome%2Fr6652%22; William Easton, "Changes to Sharing and Viewing News on Facebook in Australia," *Facebook News*, February 17, 2021, at https://about.fb.com/news/2021/02/changes-to-sharing-and-viewing-news-on-facebook-in-australia/; Mel Silva, "Supporting Australian Journalism: A Constructive Path Forward," *Google Blog*, at https://about.google/google-in-australia/an-open-letter/.

Similarly, the French competition authority required Google to negotiate with publishers about using their content after the government implemented components of the European Union Digital Single Market Directive, which created obligations for online content-sharing service providers, such as requiring providers to make "best efforts" to obtain licenses for content that appears on their sites. Google reportedly reached an agreement with the publishers in January 2021. See European Union, "Directive 2019/790 of the European Parliament and of the Council," Official Journal of the European Union, April 17, 2019, at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0790&from=EN; Natasha Lomas, "Google Inks Agreement in France on Paying Publishers for News Reuse," *TechCrunch*, January 21, 2021, at https://techcrunch.com/2021/01/21/google-inks-agreement-in-france-on-paying-publishers-for-news-reuse/.

[63] This section focuses on news publishers' relationship with social media. News publishers can be affected by other aspects of social media, such as users posting information about an incident (e.g., car accident, shooting), particularly if it spreads quickly or goes "viral." These potential effects are beyond the scope of this report.

[64] For example, Facebook launched a section exclusively for news—Facebook News—in June 2020; see Sarah Perez, "Facebook Launches to All U.S. with Addition of Local News and Video," TechCrunch, June 9, 2020, at https://techcrunch.com/2020/06/09/facebook-news-launches-to-all-in-u-s-with-addition-of-local-news-and-video/; Facebook, "How Facebook News Works," Facebook News, at https://www.facebook.com/news/howitworks.

[65] Online advertising is the primary source of revenue for most social media platforms. For example, in 2020, it made up 98% of Facebook's total revenue and 86% of Twitter's. See Facebook Inc. SEC Form 10-K for the year ending December 31, 2020; Twitter Inc. SEC Form 10-K for the year ending December 31, 2020.

[66] Sinan Aral and Michael Zhao, "Social Media Sharing and Online News Consumption," SSRN, posted February 14, 2019, at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3328864.

[67] Some studies have found that when users are unable to access news content through social media, more individuals

make it possible for publishers to obtain more detailed information about their readers and target potential readers;[68] some newspapers, particularly smaller ones, may not have direct access to these technologies.

The complexities of social media platforms' relationship with newspapers mirror those of news aggregators. Detailed information about social media platforms' agreements with newspaper publishers typically are not publicly available, and the applicability of existing regulations, particularly related to copyright laws, can be unclear. For example, when Meta (formerly Facebook Inc.)[69] launched a news section on its platform Facebook, it reportedly paid licensing fees to only some of the publishers whose articles it republished, with the amount depending on the size of the publisher.[70] Meta subsequently stated that it would pay $5 million to support local journalists to "regularly publish written, public-interest journalism focused on a local community," with precedence given to areas that "are not currently served by an existing journalism entity."[71]

Newspaper Websites: Flow of Advertising Revenue

Online advertising has become a growing source of revenue for newspaper publishers, as discussed earlier (see **Figure 2**). Nevertheless, for several reasons, the revenue many newspaper publishers receive from online advertising is insufficient to compensate for the decline in print advertising. Online advertising has not enabled newspaper publishers to regain print advertising devoted to recruitment, real estate, and vehicle sales. More generally, a proliferation of options has constrained the prices media outlets can charge for online advertising, particularly for advertisements appearing on mobile devices.[72]

In order to attract readers to their websites and sell online advertising, newspaper publishers must rely on some of the very companies with which they compete for advertising revenue. Newspapers rely on Google's search engine and Google News to refer readers to their news sites. In addition, both advertisers and newspaper publishers rely on Google to supply the technology necessary to place online advertising.

This section describes how the structure of the online advertising industry—particularly the structure of the automated, or "programmatic," advertising industry—affects the flow of

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went directly to the news publishers' platform (Josh Schwartz, "What Happens When Facebook Goes Down? People Read the News," Nieman Lab, October 22, 2018, at https://www.niemanlab.org/2018/10/what-happens-when-facebook-goes-down-people-read-the-news/), while others found that fewer individuals do (Catarina Sismeiro and Ammara Mahmod, "Competitive vs. Complementary Effects in Online Social Networks and News Consumption: A Natural Experiment," *Management Science*, vol. 64, no. 11 (November 2018), pp. 5014-5037).

[68] For example, Facebook offers various tools, such as Page Insights, that provide information on the number of views and other metrics for each piece of content. Facebook, "The Journalist's Guide to Facebook and Instagram," Facebook Journalism Project, May 2021.

[69] Meta, "Introducing Meta: A Social Technology Company," October 28, 2021, at https://about.fb.com/news/2021/10/facebook-company-is-now-meta/.

[70] Lukas Alpert and Sahil Patel, "With Facebook's Coming News Tab, Only Some Will Get Paid," *Wall Street Journal*, September 30, 2019, at https://www.wsj.com/articles/with-facebooks-coming-news-tab-only-some-will-get-paid-11569852600.

[71] Campbell Brown, "Creating More Opportunities for Independent, Local Writers to Thrive," Meta Journalism Project, April 29, 2021, at https://www.facebook.com/journalismproject/apply-platform-independent-writers.

[72] Tribune 2020 SEC Form 10-K., p. 10; Gannett Co., Inc. SEC Form 10-K for the fiscal year ended December 31, 2020, pp. 19-20 (Gannett 2020 SEC Form 10-K); NYT 2020 Annual Report, p. 12.

advertising revenue to newspaper publishers, and the role of Google in the advertising technology supply chain.

Digital Advertising Formats/Types of Expenditures

Digital advertising typically appears in one of six forms:[73]

- **Digital display advertising** describes the "boxes" on websites, apps, or platforms that appear along the top of the screen as a "banner ad" or elsewhere on the screen. Digital display represented an estimated 31.5% of the $139.8 billion in U.S. digital advertising expenditures in 2020.
- **Search advertising** is the term used to describe listings of advertisers returned in response to a consumer's query. The advertisers pay to have their names and website links included and/or prioritized among the query results. Search accounted for an estimated 42% of 2020 digital ad spending in the United States.
- **Video advertising** refers to online advertisements that contain video. These accounted for an estimated 18% of 2020 U.S. digital advertising expenditures.
- **Classified advertisements.** These accounted for an estimated 2.9% of 2020 U.S. digital advertising expenditures.
- **Lead generation** fees refer to payments made by advertisers to website operators that refer qualified potential customers or provide information about consumers who have agreed to be contacted by advertisers. These represented an estimated 2.4% of 2020 U.S. digital advertising expenditures.
- **Audio formats** are audio-only advertisements. Digital audio advertisements occur in streaming music services and podcasts, among other media. These represented an estimated 2.1% of 2020 U.S. digital advertising expenditures.

Thus, the most popular formats of digital advertising are digital display and search, which combined accounted for 73.5%, or $102.8 billion, of 2020 U.S. digital advertising expenditures. Market research firms and government studies indicate that Google plays a significant role in the selling of each format, both directly (especially in search)[74] and indirectly, as an intermediary in the display advertising marketplace. Most local newspapers primarily rely on "digital display advertising" for online advertising revenues.[75]

Reliance on Technology Firms in Programmatic Advertising

The process of purchasing and selling advertising in nondigital media (e.g., print editions of newspapers) has traditionally been relatively straightforward: advertisers or their advertising agencies contacted the media organization's salespeople (or vice versa), and the parties would negotiate and agree on contracts concerning price, ad placement, and frequency, among other terms and conditions. In the early days of digital advertising, the process was similar, involving bilateral negotiations between representatives of buyers and sellers of advertising.[76] The process

[73] PwC and Internet Advertising Bureau, *Internet Advertising Revenue Report: Full-Year 2020 Results*, New York, NY, April 2021, p. 14, at https://www.iab.com/insights/internet-advertising-revenue-report/.

[74] Research firm e-Marketer estimated that Google would have 56.8% of all U.S. ad search revenue during 2021. Sara Lebow, "Google Collects More Than Half of All U.S. Search Ad Revenue," eMarketer, April 12, 2021, at https://www.emarketer.com/content/google-collects-more-than-half-of-all-us-search-ad-revenue.

[75] See, for example, DallasNews SEC Form 10-K, p. 13 (explaining components of its digital advertising revenues).

[76] OECD November 2020 Report, p. 14.

was based solely on "contextual targeting." That is, brands associated with a particular topic would attempt to place advertisements in spaces next to related articles or within related websites. **Figure 5** illustrates how a classified advertisement sold directly via a newspaper publisher, based on contextual targeting, appears to a visitor of the newspaper's website.

Figure 5. Classified Ad Based on Contextual Targeting

Source: *New York Times*, December 21, 2021, at https://www.nytimes.com/2021/12/21/theater/broadway-covid-omicron.html (visited December 21, 2021).

In the last 25 years, however, the buying and selling of digital advertising has become more automated and complex, with computer software using algorithms to buy and sell advertising on newspapers' websites via intermediaries. The term "programmatic" refers to this automated process of buying and selling advertisements.

Regardless of whether online publishers sell their online display advertising inventory directly to advertisers, or indirectly (via intermediaries), the advertisements target specific users at specific times and locations.[77] Instead of purchasing inventory based on the content of a newspaper's online articles, advertisers purchase the inventory based on the ability to reach a specific user. Because online ads are targeted at individual users, a website with three different ad slots on a page with 1 million readers has 3 million unique ad units to sell.

Direct Programmatic Sales Process: Large Publishers

Large publishers, including publishers of major national newspapers such as the *New York Times* and the *Wall Street Journal*, can sell their advertising inventory directly to advertisers.[78] In a

[77] Third Amended Complaint, *State of Texas, et al. v. Google LLC*, No. 1:21-md-03010-PKC (S.D. NY January 14, 2022), ¶¶44-45 (Texas, et al. v. Google, January 2022 3rd Amended Complaint). For more information about this lawsuit, see "Google's Role in Advertising Technology Stack." The states originally filed their third amended complaint in November 2021, Third Amended Complaint, The State of Texas, et al. v. Google, LLC, 1:21-CV-06841 (S.D.N.Y. Nov. 12, 2021). The Southern District of New York released a version in January 2022 with fewer redactions. This report references the January 2022 version.

[78] OECD November 2020 Report, p. 15. In an effort to improve users' experiences, the New York Times Company has

process called "programmatic direct," large publishers conduct automated private auctions of advertising space or employ salespeople to negotiate longer-term placements with advertisers. The publishers' own ad servers manage the inventory of available advertising spaces and are responsible for the decision logic underlying the final choice of which ad to serve, based on the direct deals reached between the publisher and advertisers.[79] According to Google's internal analysis, large news publishers keep 95% of the revenue when they sell advertisements directly in this way.[80]

Indirect Programmatic Sales Process: Smaller Publishers

A publisher cannot forecast precisely how many of its ad spaces will be available to sell directly to advertisers because its inventory depends on how many users actually visit the publisher's website.[81] For this reason, a publisher may find itself with unsold surplus inventory. Enabling publishers to sell inventory that otherwise might be surplus was the original impetus for the development of a specialized "indirect" distribution channel, whereby publishers sell their ad inventory indirectly to advertisers via auctions.

"Indirect" sales occur through centralized electronic trading venues called "ad exchanges" and through "networks" of publishers and advertisers. Publishers that sell this way permit ad exchanges to auction off some or their entire inventory to advertisers in real time; in return, the ad exchange or network will retain a portion of the proceeds. **Figure 6** illustrates how a display advertisement sold via indirect advertising appears to some readers of an online newspaper's website. Based on his/her/their behavioral data, another reader viewing the same article might see a different display advertisement.

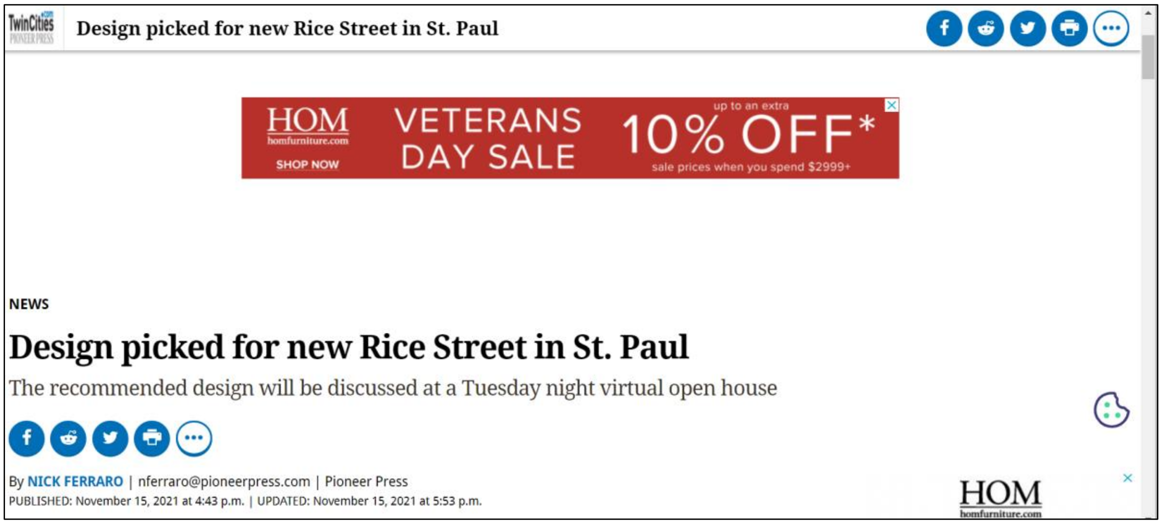
limited advertising presented in its iOS (Apple) and Android (Google) mobile applications to ads it sells directly. NYT 2020 Annual Report, p. 12.

[79] Competition and Markets Authority (CMA), United Kingdom, *Online Platforms and Digital Advertising*, Market Study Final Report, London, UK, July 2020, Appendix M, p. M5, at https://www.gov.uk/cma-cases/online-platforms-and-digital-advertising-market-study#final-report (July 2020 CMA Report).

[80] Stewart, Bonita, Vice President, Global Partnerships, Google, "A Look at How News Publishers Make Money with Google Ad Manager," Google Ad Manager (blog), Google, June 23, 2020, at https://blog.google/products/admanager/news-publishers-make-money-ad-manager/.

[81] Texas, et al. v. Google, January 2022 3rd Amended Complaint, ¶42.

Figure 6. Display Advertising Sold via Indirect Advertising



Source: *St. Paul Pioneer Press*, November 15, 2021, at https://www.twincities.com/2021/11/15/design-picked-for-new-rice-street-in-st-paul/.

Most online publishers in the United States sell at least some of their inventory to advertisers indirectly. However, smaller publishers, including those of local newspapers, are more likely than large publishers to rely exclusively on the indirect programmatic sales process. As the Australian Competition and Consumer Commission (ACCC), in its December 2020 interim report, explained,

> For many small advertisers and publishers that currently engage in the ad tech supply chain, the costs involved in relying on direct negotiation for a large proportion of their display advertising may be prohibitive.... [I]n comparison to selling via the ad tech supply chain, many publishers may not have the time, resources or expertise to sell all ad inventory on [their] website[s] via direct deals and programmatic direct. As such, publishers may lose potential revenue if they do not also sell inventory via the ad tech supply chain.[82]

Several studies, using various methodologies, indicate that publishers keep only 49% to 67% of indirect programmatic advertising spending.[83] The remaining revenue flows to ad technology ("ad tech") intermediaries. The extreme complexity of the indirect programmatic advertising sales process contributes to what a British study describes as "a markedly opaque supply chain."[84]

According to the December 2020 ACCC Interim Report, "The opaque and complex nature of the ad tech supply chain can mean that ... [i]t may ... be difficult for stakeholders to know whether [ad-tech intermediaries are engaging in] conduct such as self-preferencing."

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[82] Australian Competition and Consumer Commission (ACCC), *Digital Advertising Services Inquiry*, Interim Report, Canberra, December 2020, p. 115, at https://www.accc.gov.au/focus-areas/inquiries-ongoing/digital-advertising-services-inquiry. (December 2020 ACCC Interim Report.)

[83] Incorporated Society of British Advertisers (ISBA) and Pricewaterhouse Coopers LLP (PwC), *ISBA Programmatic Supply Chain Transparency Study*, London, UK, May 2020, p. 8, at https://www.isba.org.uk/media/2424/executive-summary-programmatic-supply-chain-transparency-study.pdf (ISBA and PwC May 2020 Study); Amy He, "eMarketer's New Ad Tech Tax Estimates that Nearly One-Third of Spending Goes to Intermediaries," *eMarketer*, August 5, 2019, at https://www.emarketer.com/content/emarketer-s-new-ad-tech-tax-estimates-show-one-third-of-spending-goes-to-intermediaries. The variance is based on different methodologies.

[84] ISBA and PwC May 2020 Study, p. 7.

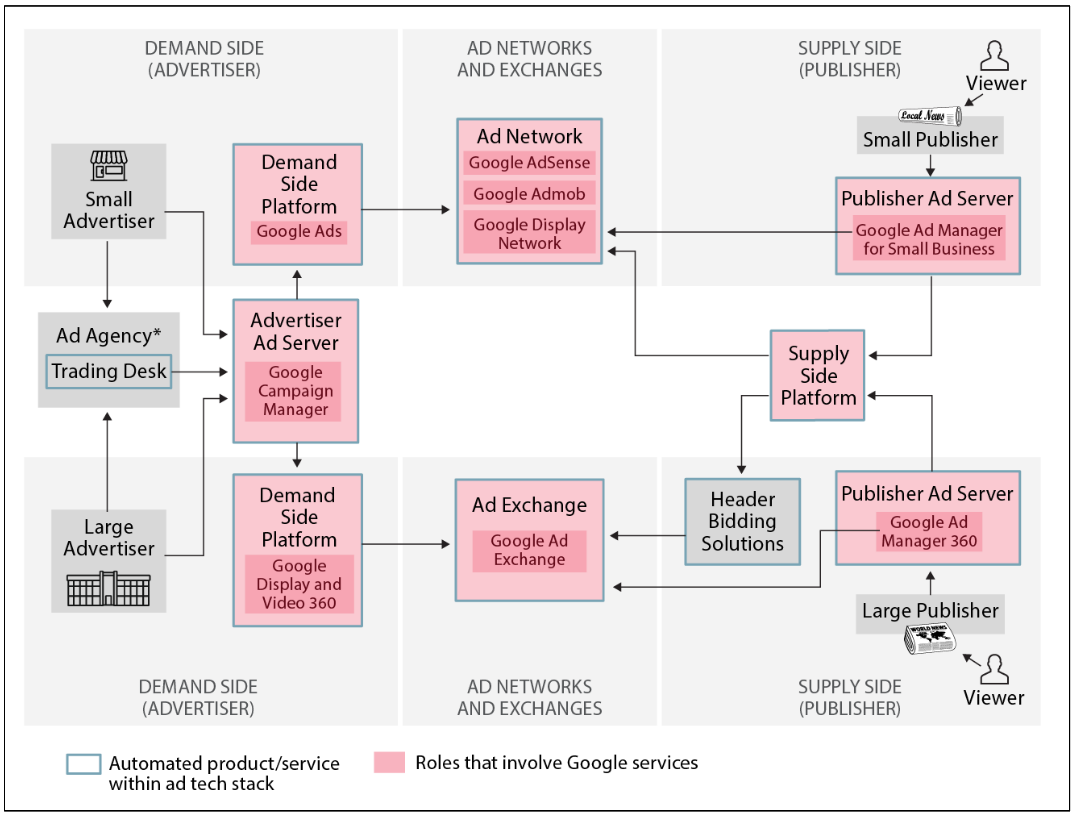
In an effort to enable newspaper publishers to keep more digital advertising revenue that would otherwise flow to ad tech intermediaries, an independent advertising agency launched a campaign in February 2021 to encourage U.S. companies to, among other actions, pledge to reallocate 20% of their programmatic advertising budgets directly to local news sources.[85]

Allegations of Anticompetitive Behavior

Google's Role in Advertising Technology Stack

As **Figure 7** illustrates, Google has a presence in each component of the tools and software that publishers and advertisers use to transmit online advertisements to users, also known as the "advertising technology stack." State and foreign government officials allege that Google's various roles in the advertising technology stack incentivize and enable it to prioritize its own interests above those of its customers, including newspaper publishers and advertisers, and generate higher fees than it could in a competitive market.

Figure 7. Google's Presence in Advertising Technology Stack



Source: CRS analysis of data from December 2020 ACCC Interim Report. See also Jon Fletcher, "How to Use Google Ad Manager as Publisher," Marfeel. October 15, 2020, at https://www.marfeel.com/resources/blog/use-google-ad-manager-as-a-publisher.

Note: Some advertisers work with ad agencies to purchase online advertisements, while others do not.

[85] Alison Weissbrot, "Indie Agency Allen & Gerritsen Urges Ad Industry to Support Local News," *Campaign*, February 18, 2021, at https://www.campaignlive.com/article/indie-agency-allen-gerritsen-urges-ad-industry-support-local-news/1707799. See also Allen & Gerritsen, "Protect Our Press," at https://protectourpress.org/thepledge.

Components of Advertising Technology Stack

Ad servers store and manage ads from across different ad campaigns to automatically decide which ads to serve to which visitors on certain web pages, and to gather data about how users interact with the ads displayed to them.[86] Publishers tend to focus on using ad servers to manage their ad inventory and reporting, while advertisers tend to focus on using them for managing the creative features of their advertising campaigns.

An *ad exchange* is a digital marketplace that enables advertisers and publishers to buy and sell display and mobile advertising inventory, often through real-time auctions.[87] Ad exchanges that serve the interests of both publishers and advertisers are both transparent and neutral when routing information about the parties' asking and bidding prices.

A *supply side platform (SSP)* is a piece of software used to sell publishers' online advertising inventory.

Google integrates its publisher ad server and SSP in its "Ad Manager" product.[88] Other companies integrate these two pieces of technology as well. Nevertheless, ad servers and SSPs perform separate functions. While SSPs focus on allowing publishers to conveniently sell their remnant ad space, ad servers are what ultimately allow an advertiser's ads to be served to a publisher's website.[89]

SSPs that act in publishers' interests connect the publishers to multiple exchanges, allowing a range of potential buyers to purchase advertising space. As described in "Allegations Regarding Google's Conduct" the state attorneys general contend that by preventing publishers from doing this, Google enabled its Ad Manager product to prioritize its own interests over those of publishers.

A *demand side platform (DSP)* is a piece of software used by advertisers (or their agencies) to buy online advertising inventory in an automated fashion. DSPs allow advertisers to buy impressions targeted to specific users across a range of publisher sites, via multiple exchanges.[90] DSPs acting in advertisers' interests enable them to buy a wide range ad inventory at the lowest possible price.[91] Similarly to SSPs, many DSPs integrate advertiser ad server functions.[92]

An *ad network* is an aggregator that purchases ad inventory from smaller publishers and then resells it to advertisers.[93] The network enables advertisers to reach users across many publishing sites (e.g., local newspapers' sites) that are not sufficiently large to trade their inventory in an exchange. Examples of ad networks featuring newspapers include the USA TODAY Network, a joint venture of Gannett and McClatchy,[94] and Zeus Prime, which includes newspaper websites

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86 "Ad Servers vs. DSPs, SSPs, DMPs & CDPS: Differences Clarified," General (blog), AdButler, March 31, 2021, at https://www.adbutler.com/blog/article/ad-servers-vs-dsp-vs-ssp-vs-dmp-vs-cdp-vs-crm (March 2021 AdButler blog).

87 Jack Marshall, "WTF Is an ad exchange?," *Digiday*, January 30, 2014, at https://digiday.com/media/what-is-an-ad-exchange/.

88 December 2020 ACCC Interim Report, p. 168.

89 March 2021 AdButler blog.

90 "What the Tech Are DSPs, SSPs, and DMPs?," Data-Driven 101 (blog), The TradeDesk. March 30, 2021, at https://www.thetradedesk.com/us/news/what-the-tech-are-dsps-ssps-and-dmps.

91 December 2020 ACCC Interim Report, p. 15.

92 March 2021 AdButler blog.

93 Texas, et al. v. Google, January 2022 3rd Amended Complaint, ¶65.

94 USA TODAY Network, "Gannett and McClatchy Collaborate to Offer Local Reach for National Advertisers," press release, February 16, 2021, at https://www.usatoday.com/story/news/pr/2021/02/16/gannett-and-mcclatchy-collaborate-

owned by the *Washington Post*, the *Dallas Morning News*, Tribune Publishing, MediaNews Group, and McClatchy.[95] Google operates its own network, called Google Display Network, which is composed of Google properties such as YouTube, Gmail, and millions of third-party publisher sites.[96] AdMob is Google's mobile ad network for apps.[97]

Allegations Regarding Google's Conduct

In 2021, attorneys general from 16 states and the Commonwealth of Puerto Rico, led by Texas Attorney General Ken Paxton, filed suit against Google LLC, alleging the company's conduct in the advertising technology stack violated antitrust laws.[98] In August 2021, the Judicial Panel on Multidistrict Litigation consolidated 20 display advertising monopoly suits against Google, including the Texas-led case and several from newspaper publishers and advertisers, for pretrial purposes.[99] In January 2022, Google filed a motion to dismiss the lawsuit, claiming that 1) the regulators are attempting to stifle market forces, and 2) the regulators waited too long to file suit.[100]

According to the lawsuit, prior to Google's entrance into the publisher "ad server"/SSP market,[101] ad servers neutrally routed publishers' ad inventory to different competing exchanges.[102] The lawsuit asserts that Google's conduct substantially changed the ad server market. One year after Google entered the advertising technology industry in 2008 with its purchase of DoubleClick, an online advertising company, the company introduced a new system called Dynamic Allocation to change the way ad servers sold inventory on behalf of publishers' websites.[103]

Before Google introduced Dynamic Allocation, newspaper publishers sold their ad inventory via a "waterfall" process conducted on their ad servers.[104] If an ad impression was available, the publisher's ad server would first check to see whether there were any direct programmatic deals

offer-local-reach-national-advertisers/6743048002/.

[95] Max Willens, "They're Solving a Problem: The Washington Post Readies Its Zeus Platform for the Buy Side," *Digiday*, March 8, 2021, at https://digiday.com/media/theyre-solving-a-problem-the-washington-post-readies-its-zeus-platform-for-the-buy-side/.

[96] Google, Google Ads Help, "Google Display Network and YouTube on computers, mobile devices, and tablets," at https://support.google.com/google-ads/answer/2740623?hl=en.

[97] Google, Google AdMob, "Earn more revenue with your apps," at https://admob.google.com/home/?gclid=EAIaIQobChMImOXXlOuq9QIVVuHICh0xQw5WEAAYASAAEgLDHPD_BwE&gclsrc=aw.ds.

[98] Texas, et al. v. Google, January 2022 3rd Amended Complaint. As of January 2022, the states represented include the following: Texas, Alaska, Arkansas, Florida, Idaho, Indiana, Kentucky, Louisiana, Mississippi, Montana, North Dakota, South Carolina, South Dakota, and Utah.

[99] The consolidated case is In Re: Google Digital Advertising Antitrust Litigation, no. 1:21-cv-0703 (S.D.N.Y.). Matthew Perlman, "State AGs Update Google Display Monopoly Case," *Law 360*, November 15, 2021.

[100] Defendant Google LLC's Memorandum of Law in Support of Its Motion to Dismiss Counts I Through IV of State Plaintiffs' Third Amended Complaint, *State of Texas, et al. v. Google LLC*, No. 21-CV-6841 (S.D.N.Y. January 21, 2022).

[101] Because Google integrates its ad server and SSP services, the terms "ad server" and "ad server market" in this lawsuit include SSPs as well.

[102] Texas, et al. v. Google, January 2022 3rd Amended Complaint, ¶56.

[103] December 2020 ACCC Interim Report, pp. 19-20. See also Louise Story and Miguel Helft, "Google Buys DoubleClick for $4.1 Billion," *New York Times*, April 14, 2007, at https://www.nytimes.com/2007/04/14/technology/14DoubleClick.html. ("For months, Google has been trying to expand its foothold in online advertising into display ads, the area where DoubleClick is strongest. Google made its name and still generates most of its revenue from search and contextual text ads.")

[104] August 2021 ACCC Final Report, pp. 105-106.

in place that needed to be fulfilled. If there were no direct programmatic deals or if they had already been fulfilled, the publisher's ad server would then offer the ad impression to SSPs, one at a time, in a set order determined by the publisher. Publishers set the order of SSPs based on what they estimated each SSP would bid (based on its historical bids). The publisher ad server would then call each SSP in sequence, with each having the ability to submit a real-time bid for the ad impression. This process would continue until an SSP purchased the ad impression (generally when an SSP submitted a bid higher than the price floor set by the publisher) or no SSPs were left to bid.

Under Dynamic Allocation, in contrast, Google's publisher ad server would take the publishers' estimated bids before each SSP received the bids, and set the highest estimated bid as a price floor. According to one trade publication, "dynamic allocation had been a way for Google to offer advertisers on its exchange a way to swoop into auctions for ad space and buy the best inventory if they could beat the going market rate."[105]

As long as Google's SSP was willing to bid $0.01 per thousand impressions higher than the publisher's price floor, it could win the auction, even if competing SSPs were willing to bid substantially more. This practice enabled Google to divert transactions that might otherwise have been executed via its rivals' advertising technology products, thereby both increasing its market share and reducing publishers' revenues.[106]

Response to Competition from Header Bidding

In response, in 2015, many publishers began to adopt an alternative system of conducting auctions, called "header bidding." The term comes from the practice of publishers (either internally or via an intermediary)[107] inserting JavaScript in advertising "headers" at the tops of their web pages.[108]

With this system, publishers can simultaneously offer inventory to multiple exchanges and then sell to the highest bidder.[109] After adopting header bidding, the attorneys general lawsuit asserts, some publishers' revenues increased by 40%.[110] Header bidding enabled publishers to bypass Google's ad exchange, thereby enabling them to forgo paying fees to Google. It also decreased the data available to Google via its various roles in the ad tech stack.[111]

Nevertheless, header bidding poses challenges for publishers. For example, the addition of extra code on their web pages can slow down the time for them to load, thereby detracting from consumers' experiences.

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105 Garett Sloane, "WTF is dynamic allocation?," *Digiday*, April 14, 2016, at https://digiday.com/media/wtf-dynamic-allocation-google-ad-auctions/.

106 Ibid.

107 Marcin Ekiert, CEO and CoFounder, Yieldbird, "To Outsource, or to Opt for InHouse? Key Questions Regarding Header Building," Ad Tech (blog), Yieldbird, August 25, 2020, at https://yieldbird.com/to-outsource-or-to-opt-for-in-house-key-questions-regarding-header-bidding/.

108 Kate Shokurova, "Website Header Design in 2020: Best Practices and Examples," *UX Planet*, February 10, 2020, at https://uxplanet.org/website-header-design-in-2020-best-practices-and-examples-1992f80ddd69.

109 Ross Benes, "An Ad Tech Urban Legend: An Oral History of How Header Bidding Became Digital Advertising's Biggest Buzzword," *Digiday*, June 16, 2017, at https://digiday.com/media/header-bidding-oral-history/.

110 Texas, et al. v. Google, January 2022 3rd Amended Complaint, ¶358.

111 Seb Joseph, "Ad Execs Dismayed, but Not Surprised by Tactics Google Allegedly Used to Control Ad Dollars," *Digiday*, October 21, 2021, at https://digiday.com/marketing/ad-execs-dismayed-but-not-surprised-by-new-alleged-actions-against-google-to-curtail-digital-ad-revenue/.

Google chose not to participate in header bidding. Google contends that its decision was "not surprising given header bidding's potential for adverse effects on users, advertisers and the ecosystem, and the fact that Google already had an efficient auction mechanism with Dynamic Allocation and [its SSP/ad exchange, then known as AdX], in which many different Google-owned and third-party ad buyers competed."[112]

In their lawsuit, however, the state attorneys general contend, "Based on a review of Google's internal documents, Google wanted to quash header bidding innovation for three reasons: (1) to maintain its publisher ad serving monopoly; (2) to continue using its control of publishers' ad server to preference its exchange and buying tools; and (3) to avoid price competition in the exchange market."[113]

They further claim that Google "punish[ed]" publishers who attempted to use header bidding by placing them in a lower position in its search engine results, thereby cutting off an important source of visitor traffic.[114] As described in "Google: Alleged Monopolization of Search Engine," the U.S. Department of Justice (DOJ) has alleged that Google has engaged in anticompetitive behavior to monopolize the search engine market.

Google's Introduction and Promotion of Open Exchange

Google introduced its own proprietary version of server-side header bidding, now known as "Open Exchange," and made it available to publishers in April 2018. According to the United Kingdom's Competition and Markets Authority, Google's internal documents indicate that its major motivation was to protect the company's revenues from the impact of header bidding.[115]

In their lawsuit, the state attorneys general allege, quoting documents from Google, that "although Google executives once considered 'creating a completely neutral platform like the [New York Stock Exchange],' they instead chose to 'stack the deck in favor of Google [demand]' by using control of [Open Exchange] to give preferred access to their own buying tools."[116]

In addition, the state attorneys general claim that "Google unlawfully excluded competition from header bidding by getting its largest Big Tech rival, Facebook,[117] to stop supporting the technology" via an agreement dated September 2018 that violated antitrust laws.[118] They state,

> The principal impetus for this deal began many months before, in March 2017, when Facebook publicly announced it would support header bidding. By doing so, Facebook would enable web and mobile app publishers and advertisers to bypass the fees associated with transacting through Google's ad server. Because header bidding cost nothing,

[112] Bitton and Lewis, p. 19.

[113] Texas, et al. v. Google, January 2022 3rd Amended Complaint, ¶361.

[114] Texas, et al. v. Google, January 2022 3rd Amended Complaint, ¶¶375, 408.

[115] July 2020 CMA Report, Appendix M, pp. M10-M11.

[116] Texas, et al. v. Google, January 2022 3rd Amended Complaint, ¶77.

[117] eMarketer estimates that in 2020, Facebook's share of total online advertising in the United States (including all formats) was 25.2%, Google's was 28.9%, and Amazon's was 10.3%. "U.S. Triopoly Digital Ad Revenue Share by Company, 2019 & 2020," eMarketer, March 2021, at https://www.emarketer.com/chart/245872/us-triopoly-digital-ad-revenue-share-by-company-2019-2020-of-total-digital-ad-spending.

[118] Texas, et al. v. Google, January 2022 3rd Amended Complaint, ¶¶ 413-450. They allege that Google and Facebook CEOs Sundar Pichai and Mark Zuckerberg, respectively, personally approved this agreement. Ibid., ¶¶423-424.

> Facebook's use of header bidding would let web publishers, mobile app publishers, and advertisers save on these fees altogether.[119]

Because of the September 2018 agreement, the state attorneys general claim that "Google [gave] Facebook a leg up in its auctions in return for Facebook backing off from header bidding."[120] In September 2021, Senators Elizabeth Warren and Richard Blumenthal, as well as Representatives Pramila Jayapal and Mondaire Jones, called on DOJ to investigate whether Google and Facebook's agreement violated Section 1 of the Sherman Antitrust Act [15 U.S.C. §1].[121] This section criminalizes "mak[ing] any contract … in restraint of trade or commerce."

In April 2021, publishers of 125 newspapers in 11 states filed or announced lawsuits against both Google and Facebook, calling this arrangement between the two companies "an illegal secretive deal" that "unlawfully monopolized the digital advertising market."[122] As of December 2021, the number of newspapers owned by publishers suing Google and Facebook has grown to 200.[123]

In a blog post, Google disputed the state attorneys generals' allegations regarding its motivations for launching Open Bidding and entering into an agreement with Facebook.[124] According to Google,

> Open Bidding provides publishers access to demand from dozens of networks and exchanges. This helps increase demand for publisher inventory and competition for ad space, which enables publishers to drive more revenue.... [Texas] AG [Ken] Paxton inaccurately claims that we manipulate the Open Bidding auction in [Facebook's] favor. We absolutely don't.... And AG Paxton's claims about how much we charge other Open Bidding partners are mistaken—our standard revenue share for Open Bidding is 5-10 percent.

Google states that Open Bidding offers many features for publishers, including simplicity, ease of use, and measures to protect users' privacy.[125]

Additional Allegations

The attorneys general further allege that Google had secretly manipulated the outcome of programmatic auctions for its own benefit.[126] For example, in a program named Project Bernanke, after former Federal Reserve Board Chairman Ben Bernanke, Google allegedly used information from past auction bids in its advertising exchange to give its own DSPs and ad exchanges

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119 Ibid., ¶414.

120 Ibid., ¶¶427-436.

121 Letter from Senator Elizabeth Warren, Senator Richard Blumenthal, Representative Pramila Jayapal, and Representative Mondaire Jones to The Honorable Merrick Garland, Attorney General, U.S. Department of Justice, and The Honorable Nicholas Ganjei, Acting U.S. Attorney, Eastern District of Texas, U.S. Department of Justice, September 1, 2021, at https://www.warren.senate.gov/download/20210830-letter-re-jedi-blue.

122 Fitzimmons Law Firm, PLLC, "Wave of Newspapers Sue Google and Facebook," press release, April 20, 2021, at https://www.editorandpublisher.com/stories/wave-of-newspaper-publishers-sue-google-and-facebook,191224.

123 Sara Fischer, Kristal Dixon, "Scoop: Over 200 Papers Quietly Sue Big Tech," *Axios*, December 7, 2021, at https://www.axios.com/1-local-newspapers-lawsuits-facebook-google-3c3dee3a-cce3-49ef-b0a2-7a98c2e15c91.html.

124 Andy Cohen, Director, Economic Policy, Google. "AG Paxton's Misleading Attacks on Our Ad Tech Business," January 21, 2021, at https://blog.google/products/admanager/news-publishers-make-money-ad-manager/.

125 Bitton and Lewis, p. 20.

126 Texas, et al. v. Google, January 2022 3rd Amended Complaint, ¶¶297-351.

advantages over competitors.[127] By ensuring that its ad tech tools processed the winning bid, Google received the transactions for its ad exchange and its DSP.[128]

Alleged Effects of Google's Role in Advertising Technology Stack on Newspaper Publishers

Authorities in several jurisdictions have alleged or are investigating allegations that Google has leveraged market power in the advertising technology stack to thwart competition.

The United Kingdom's Competition and Markets Authority estimated that large publishers using Google's ad server Ad Manager retain, on average, 70%-80% of advertising revenue received by Google, whereas small publishers using Google's ad server AdSense for Content retain, on average, 60%-70% "of the revenues earned by Google from advertisers."[129] The authority's July 2020 report stated, "In acting simultaneously on behalf of publishers and advertisers, Google faces strong conflicts of interest. It has been able to leverage the market power from its owned-and-operated advertising inventory [e.g., on YouTube] into the open display market and within the ad tech stack, making it harder for third-party intermediaries to compete."[130]

The Australian Competition and Consumer Commission, in its December 2020 interim report, stated that it had "received submissions during the course of the Inquiry alleging that Google's position across the [advertising technology stack] may have allowed Google to engage in conduct which has limited competition in the supply of ad tech services."[131]

In June 2021, France's Autorité de la concurrence, following referrals from several newspaper publishers, issued a decision

> sanctioning Google, up to 220 million euros, for having abused its dominant position in the advertising server market for website and mobile applications publishers…. [T]he press groups—including those who were at the origin of the referral to the Autorité—were affected even though their economic model is also strongly weakened by the decline in sales of print subscriptions and the decline in associated advertising revenue.[132]

Also in June 2021, the European Union's European Commission

> opened a formal antitrust investigation to assess whether Google has violated [European Union] competition rules by favouring its own online display advertising technology services in the so called "ad tech" [stack], to the detriment of competing providers of advertising technology services, advertisers and online publishers. The formal investigation will notably examine whether Google is distorting competition by restricting

[127] Jeff Horwitz and Keach Hagey, "Google's Secret 'Project Bernanke' Revealed in Texas Antitrust Case," *Wall Street Journal*, April 11, 2021, at https://www.wsj.com/articles/googles-secret-project-bernanke-revealed-in-texas-antitrust-case-11618097760.

[128] Seb Joseph, "Ad Execs Dismayed, but Not Surprised by Tactics Google Allegedly Used to Control Ad Dollars," *Digiday*, October 21, 2021, at https://digiday.com/marketing/ad-execs-dismayed-but-not-surprised-by-new-alleged-actions-against-google-to-curtail-digital-ad-revenue/.

[129] July 2020 CMA Report, Appendix R, p. R14.

[130] Ibid., p. 211.

[131] December 2020 ACCC Interim Report, p. 15.

[132] Autorité de la concurrence, "Le Autorité de la Concurrence Hands out a €220 Million Fine to Google for Favoring Its Own Services in the Online Advertising Sector," press release, June 7, 2021, at https://www.autoritedelaconcurrence.fr/en/press-release/autorite-de-la-concurrence-hands-out-eu220-millions-fine-google-favouring-its-own.

> access by third parties to user data for advertising purposes on websites and apps, while reserving such data for its own use.[133]

In their complaint, the state attorneys general allege, "Google's conduct unlawfully forecloses competition in the markets for (1) publisher ad servers, (2) ad exchanges, (3) in-app networks, (4) ad buying tools for large advertisers, and (5) ad buying tools for small advertisers."[134]

Additional Antitrust Lawsuits in the United States

Additional antitrust lawsuits, while less directly related to newspaper publishers, concern alleged conduct that could affect publishers' ability to maximize revenues from licensing and subscriptions.

Facebook: Alleged Monopolization of Social Media

In August 2021, the Federal Trade Commission (FTC) filed an amended complaint against Meta Platforms alleging that its Facebook subsidiary had unlawfully sought to suppress competition to its social networking service by acquiring potential rivals such as the messaging platform WhatsApp and image-sharing app Instagram.[135] In addition, the FTC asserts, Facebook conditioned app developers' access to its platform on the developers' agreement to refrain from competing with Facebook's core services and from facilitating the growth of potential rivals to Facebook.[136] The FTC requests that the U.S. District Court for the District of Columbia, among other actions, require Facebook to divest assets, including Instagram and WhatsApp, in order to promote competition among personal social networking platforms.

Increased competition for Facebook could potentially decrease the relative bargaining power of Facebook vis-à-vis newspaper publishers.

Apple and Google: App Stores Policies

Apple and Google generally require that they be enabled by app developers to handle all payments for apps sold in Apple and Google's respective app stores.[137] Typically, for subscription-based apps, Apple collects a standard 30% commission during the first year on its App Store, and a 15% commission thereafter.[138] In some instances, Apple makes exceptions to this policy. In November 2020, Apple announced that beginning in January 2021, small businesses generating up to $1 million per year in revenues would need to pay only a 15%

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[133] European Commission, "Antitrust: Commission Opens Investigation into Possible Anticompetitive Conduct by Google in the Online Advertising Technology Sector," press release, June 22, 2021, at https://ec.europa.eu/commission/presscorner/detail/hu/ip_21_3143.

[134] Texas, et al. v. Google, November 2022 3rd Amended Complaint, ¶244.

[135] First Amended Complaint for Injunctive and Other Equitable Relief ¶¶2, 6-7 FTC v. Facebook, No. 1:20-cv-03590 (D.D.C. August 19, 2021). The FTC filed an amended complaint after a federal judge dismissed the agency's original lawsuit in June 2021, finding that the agency failed to sufficiently support its allegation that Facebook engaged in lawful monopolization of the personal social networking market was insufficient. FTC v. Facebook, Inc., No. 20-3590, 2021 (D.D.C. June 28, 2021).

[136] First Amended Complaint, for Injunctive and Other Equitable Relief ¶8.

[137] Jack Nicas, Kellen Browning, and Erin Griffin, "Fortnite Creator Sues Apple and Google After Ban from App Stores," *New York Times*, August 13, 2020.

[138] Sarah Perez, "Apple Lowers Commission on In-App Purchases for news Publishers Who Participate in Apple News," *TechCrunch*, August 26, 2021, at https://techcrunch.com/2021/08/26/apple-lowers-commissions-on-in-app-purchases-for-news-publishers-who-participate-in-apple-news/.

commission in the first year as well.[139] In March 2021, Google announced that it would follow suit beginning in July 2021.[140] In September 2021, Apple announced that it would reduce the initial year rate to 15% for news publishers that participate in the Apple News app and meet certain requirements.[141] In October 2021, Google announced that it would decrease the commission for all subscriptions sold through the Google Play app store beginning on January 1, 2022.[142]

In August 2020, after Epic Games, the company that produces the video game Fortnite, encouraged mobile-app users to pay it directly rather than through Apple's and Google'e app stores, both Apple and Google removed the Fortnite app from their stores.[143] Epic filed lawsuits against both Apple and Google, claiming that the companies engaged in anticompetitive behavior with respect to their app store policies.[144] In September 2021, a California federal judge ordered Apple to permit Epic Games and other app developers to steer customers outside of its app store, but permitted Apple to keep other restrictions in place.[145] In November 2021, the judge directed Apple to end its anti-steering rules by December 9, 2021, even as Apple appeals the September 2021 decision.[146]

In July 2021, attorneys general from 36 states and Washington, DC, also filed an antitrust complaint against Google. The complaint alleges that Google effectively forced Android users and application developers to use its app store while collecting an "extravagant commission" rate of 30% of the price that consumers pay to purchase subscriptions within Google Play Store."[147] Google and the parties suing it for allegedly monopolizing its Android Play store have agreed to a January 2023 trial.[148]

If the courts were to rule against Google and Apple in these cases, these platforms might have to lower the commissions they charge owners of apps, including newspaper publishers. In addition,

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139 Sarah Perez, "Apple Dropping App Store Fees to 15% for Small Businesses with Under $1 Million in Revenues," *TechCrunch*, November 18, 2020, at https://techcrunch.com/2020/11/18/apple-to-reduce-app-store-fees-for-small-businesses-with-under-1-million-in-revenues/.

140 Sameer Samat, VP, Product Management, Android and Google, "Boosting Developer Success on Google Play," Android Developers Blog, March 16, 2021, at https://android-developers.googleblog.com/2021/03/boosting-dev-success.html.

141 Apple Inc., "Apple Introduces the News Parnter Program," press release, August 26, 2021, at https://www.apple.com/newsroom/2021/08/apple-introduces-the-news-partner-program/. One year prior to Apple's announcement, a trade group representing newspaper publishers sent a letter to Apple requesting information about how to qualify for more favorable terms regarding distribution in the app store. Letter from Jason Kint, CEO, Digital Content Next, to Tim Cook, CEO, Apple, August 20, 2020, at https://digitalcontentnext.org/wp-content/uploads/2020/08/DCN-Letter-to-Apple-final.pdf.

142 Sameer Samat, VP, Product Management, Android and Google, "Evolving Our Business Model to Address Developer Needs," Android Developers Blog, October 21, 2021, at https://android-developers.googleblog.com/2021/10/evolving-business-model.html.

143 Jack Nicas, Kellen Browning and Erin Griffin, "Fortnite Creator Sues Apple and Google After Ban from App Stores," *New York Times*, August 13, 2020.

144 Motion for Temporary Restraining Order, Epic Games, Inc. v. Apple Inc., No. 3:20-cv-05640 (N.D. Cal. August 17, 2020); Complaint for Injunctive Relief, Epic Games, Inc. v. Google LLC et al., No. 5:20-cv-05671 (N.D. Cal August 13, 2020).

145 Epic Games, Inc. v. Apple Inc., No. 4:20-cv-05640-YGR, 2021 U.S. Dist. LEXIS 172303 (N.D. Cal. September 10, 2021).

146 Epic Games v. Apple Inc., No. 4:20-cv-05640-YGR, 2021 U.S. Dist. LEXIS 220266 (N.D. Cal. November 9, 2021).

147 Complaint ¶¶3-4, *State of Utah, et al. v. Google et al.*, No. 3:21-cv-05227 (N.D. Cal. July 7, 2021).

148 Joint Statement re: Case Schedule and Trial Structure, *Google Play Store Antitrust Litigation*, No. 3:21-md-02981-JD, January 14, 2022.

a ruling against Google and Apple that would enable people to download apps outside of the companies' stores would enable publishers to collect directly from subscribers/readers. The improved data could in turn enable publishers to charge advertisers higher rates for the ability to more precisely target subscribers/readers in online advertisements.[149]

Google: Alleged Monopolization of Search Engine

In October 2020, DOJ, along with 11 state attorneys general, filed a civil antitrust lawsuit against Google in the U.S. District Court for the District of Columbia "to stop Google from unlawfully maintaining monopolies through anticompetitive and exclusionary practices in the search and search advertising markets and to remedy the competitive harms."[150] This lawsuit was supported by the News Media Alliance, a trade organization representing newspaper publishers, which has charged that Google has increasingly used its search function to direct users to its own websites rather than those of publishers.[151]

Potential Legislative Actions

Bills introduced in the 117th Congress to support newspaper publishers and journalists fall into two main categories: some would amend antitrust laws in ways that might benefit newspaper publishers, while others would support newspaper publishers with grant funding and tax breaks.[152] Selected examples are discussed below.

Amending Antitrust Laws

The Journalism Competition and Preservation Act of 2021 (H.R. 1735; S. 673) would provide an antitrust exemption for news content creators in negotiations with online content distributors for four years.[153] Sponsors of the bill stated that it is intended to support local newspapers and to increase the diversity of news publishers.[154] However, some Members have raised concern about the definition of "news content creators" and potential unintended effects of the bill.[155]

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[149] Rob Williams, "App Store Law Would Give Publishers More Flexibility" (commentary), *MediaPost*, August 13, 2021, at https://www.mediapost.com/publications/article/365939/app-store-law-would-give-publishers-more-flexibili.html?utm_source=newsletter&utm_medium=email&utm_content=headline&utm_campaign=123329&hashid=XNjiNboFTaeCo257joHIYw.

[150] U.S. Department of Justice, "Justice Department Sues Monopolist Google for Violating Antitrust Laws," press release, October 20, 2020, at https://www.justice.gov/opa/pr/justice-department-sues-monopolist-google-violating-antitrust-laws.

[151] News Media Alliance, *How Google Abuses Its Position as a Market Dominant Platform to Strong-Arm News Publishers and Hurt Journalism*, Arlington, VA, June 2020, p. 2, at http://www.newsmediaalliance.org/wp-content/uploads/2020/06/Final-Alliance-White-Paper-June-18-2020.pdf.

[152] Other bills have been introduced that would affect journalists, which this report does not discuss. For example, the Journalist Protection Act (S. 2528; H.R. 4857) would implement penalties for assaulting journalists, and the Press Act (S. 2457; H.R. 4330) would not allow a federal entity to compel a journalist or covered service provider to disclose protected information without a court-issued subpoena or other compulsory process.

[153] A similar bill (H.R. 2054) was previously introduced in the 116th Congress.

[154] "Senator Klobuchar and Representative Cicilline Introduce Legislation to Protect Journalism in the United States," *Senator Amy Klobuchar News Release*, March 10, 2021, at https://www.klobuchar.senate.gov/public/index.cfm/2021/3/senator-klobuchar-and-representative-cicilline-introduce-legislation-to-protect-journalism-in-the-united-states.

[155] House Subcommittee on Antitrust, Commercial, and Administrative Law, "Reviving Competition, Part 2: Saving the Free and Diverse Press," March 12, 2021, at https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=111315.

The effect of the bill on the newspaper industry would depend on how publishers would respond to the antitrust exemption. For example, if large newspaper publishers group together to negotiate with online content distributors, concentration could increase among newspapers, furthering the decline of local newspapers. However, if large newspaper publishers join small ones to negotiate with online content distributors, smaller newspaper publishers may be able to improve their bargaining power and obtain greater revenue from these online platforms.

Other bills amending antitrust laws introduced in the 117th Congress may also affect newspapers. For example, the Ending Platform Monopolies Act (H.R. 3825) would make it unlawful for a covered platform[156] to own or control other lines of business that create the incentive and ability for the covered platform to advantage its own business or exclude potential competitors. This bill could affect some online platforms, such as news aggregators that publish original content, depending on the criteria used to determine lines of business. The bill might also increase the bargaining power of newspaper publishers, depending on the changes online platforms are required to implement.[157]

Grants and Tax Breaks

Grant Funding

The 21st Century Federal Writers' Project Act (H.R. 3054) would create a grant program administered by the U.S. Department of Labor for eligible entities to support individuals who are unemployed or underemployed in order to document in writing and images American society and the broad impacts and effects of the COVID-19 pandemic in the United States. Eligible entities would include, among others, nonprofit and for-profit newsrooms. The bill would authorize appropriations of $60 million for FY2022 for the program.

Tax Breaks for News Publishers, Advertisers, and Subscribers

The Local Journalism Sustainability Act (H.R. 3940; S. 2434) would allow individual and business taxpayers to receive tax credits for supporting local newspapers and media. Specifically, individual taxpayers might claim an income tax credit of up to $250 for a local newspaper subscription. The bill also would allow local newspaper employers a payroll tax credit for wages paid to an employee for service as a local news journalist and certain small businesses a tax credit for local newspaper and media advertising expenses. Portions of this bill have been incorporated into the Build Back Better Act (H.R. 5376).[158]

Establishment of Local News Committee

The Future of Local News Act of 2021 (H.R. 3169; S. 1601) would create the Future of Local News Committee to examine the state of local news and make recommendations related to the ability of local news to meet information needs. The duties of the committee would include (1) examining the implications of the loss of local newspapers, digital news outlets, and broadcasting outlets; (2) assessing the impact of the COVID-19 pandemic and whether the Paycheck

[156] To be considered a covered platform, an online platform must meet certain criteria for the number of monthly active users and net annual sales or market capitalization.

[157] For example, if this bill is implemented, it may become unlawful for a company to operate advertising services and an ad-based news aggregator service.

[158] Most of Section 3 of H.R. 3940 was incorporated into Section 138517 of H.R. 5376 as passed by the House of Representatives on November 19, 2021.

Protection Program has had beneficial effects on local news organizations; and (3) assessing and examining existing and potential means of supporting local news production. The bill would direct the committee to recommend mechanisms that the federal government could implement to support the production of local news, such as the possible creation of a national endowment for local journalism. The committee would comprise 13 members, including 8 appointed by congressional leadership.

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