

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
The State of Competition in the Communications) GN Docket No. 22-203
Marketplace)
)

COMMENTS OF THE
NATIONAL ASSOCIATION OF BROADCASTERS

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I. INTRODUCTION AND SUMMARY

*“Competition” – In business, rivalry between entities for customers
or a share of the marketplace.¹*

Every two years the Commission must prepare a report assessing the state of competition in the communications marketplace, including competition in audio and video services.² Viewing this task through the clear and simple definition of competition quoted above, broadcast radio and television stations obviously have myriad rivals for customers (*i.e.*, audiences and advertisers) and increasingly struggle for a competitive share of the marketplace. As the National Association of Broadcasters (NAB)³ has consistently pointed out, and explains again below, local broadcasters should not have to compete with these

¹ [yourdictionary.com/competition](https://www.yourdictionary.com/competition)

² *Office of Economics and Analytics Seeks Comment on the State of Competition in the Communications Marketplace*, Public Notice, GN Docket No. 22-203, DA 22-535 (May 16, 2022) (Public Notice or Notice).

³ NAB is a nonprofit trade association that advocates on behalf of free local radio and television stations and broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the courts.

rivals while encumbered by antiquated and asymmetric regulatory restrictions precluding competition on an even remotely level playing field.

In previous competition reports, the Commission correctly found that the audio and video markets include not only broadcast stations but also multichannel program distributors (e.g., satellite radio/TV, cable TV) and online providers. Competition among these various marketplace participants has become even more fierce over the past two years. Media and advertising industry analysts agree that the pandemic accelerated consumers' and advertisers' embrace of all things digital, thereby exacerbating the competitive struggles of advertising-dependent over-the-air (OTA) broadcasters. As Deloitte concluded, "the COVID-19 story isn't so much 'before and after' as it is 'before and *faster*.'"⁴

Since the end of 2019,⁵ consumer adoption of digital devices that enable access to virtually unlimited audio and video content 24/7/365 has continued apace. Consumers are acquiring more smart devices, from phones to watches to speakers, and record numbers are now streaming audio (and video), paying for subscription music services with tens of millions of songs available, and listening to the millions of available podcast series. These trends have further fragmented the formerly mass audience for AM/FM broadcasting and, when combined with consumers spending less time in automobiles due the pandemic, further reduced listening to terrestrial radio.

The pandemic's shock to the advertising market also harmed local radio stations. As the FCC documented in its 2020 competition report, the radio industry after the 2008-2009 recession made a limited recovery but never again reached the levels of advertising revenue

⁴ Deloitte, *Digital media trends survey*, at 3 (14th ed. 2020) (emphasis in original).

⁵ Public Notice at 2 (stating that the FCC's 2020 competition report reflected the state of the communications marketplace primarily as of year-end 2019).

earned prior to that recession. The ad revenues earned by local radio stations then took another serious hit from the pandemic recession in 2020, from which station revenues have yet to recover.

Similarly, the pandemic has “categorically shifted the television viewing landscape.”⁶ Consumers have quickly acquired more internet-connected TV devices, smart TVs, and mobile devices, and use them to spend significantly more time viewing increased numbers of streaming services, both subscription and ad-supported, the latter of which competes directly with broadcast TV for advertising. In this fragmented sea of video (and audio) choice, the formerly mass audience for traditional broadcast TV has declined in size, diverted to innumerable cable/satellite channels, hundreds of video streaming services, video games, and more. Due to these audience trends, and the increasing dominance of digital platforms in the advertising market, local TV stations’ ad revenues have dropped notably in real terms.

Remarkably, it has become commonplace to say that the abundance of choice is “overwhelming” viewers.⁷ Commentators now observe, correctly, that there is “too much TV” for consumers to keep up with, and wonder whether the marketplace has finally reached its limit.⁸ This state of affairs is a very far cry from previous eras in which scarcity was perceived as a defining characteristic of media markets.

In addition to the pandemic-accelerated digital disruption of the media and advertising markets, the Commission also needs to recognize in its 2022 report that the rise of the giant technology platforms has imperiled the ability of broadcast stations to reach

⁶ Nielsen, *The Gauge Shows Streaming Is Taking A Seat At The Table* (June 17, 2021).

⁷ Nielsen, *Streaming is the future of TV, but the abundance of platform choice is overwhelming for viewers* (Apr. 11, 2022).

⁸ L. Holmes, *There’s too much TV to keep up. Have we hit the limit?*, npr.org (May 3, 2022).

online audiences with their local news and other content and to derive ad revenue from that content. Beyond diverting advertisers – and crucial ad revenue – away from local broadcast stations in all-sized markets, these digital platforms also control the technologies that power both content discovery (search) and digital advertising, permitting them to make unilateral decisions and impose policies that impede broadcasters’ ability to connect with their audiences and to monetize their own content online. The dominant platforms and tech companies, including Google, Amazon, and Apple, now also compete directly with radio and TV broadcasters for audiences, as these giant entities own a number of leading streaming audio and video services and enjoy yet another competitive advantage by controlling many of the consumer technologies (e.g., smartphones, smart speakers, connected TV devices, etc.) used by hundreds of millions of U.S. consumers to access digital content.

Beyond recognizing here the unprecedented level of competition in today’s media and advertising markets, the Commission in further proceedings must reexamine its current regulatory regime and eliminate or revise rules uniquely burdening broadcast stations but not broadcasters’ exponentially larger competitors. This effort should include revision of the outdated radio and TV ownership restrictions, which pre-date internet ubiquity, the proliferation of digital devices, and widespread adoption of audio and video streaming services, as well as the growth of “Big Tech.” In addition, the FCC must take a hard look at regulatory policies that place roadblocks – or at least speedbumps – in the path of broadcast innovation but do not similarly burden the deployment of improved technologies by other participants in the communications marketplace. Rather than reflexively viewing broadcast innovation as a potential basis for more stringent regulation, the Commission should acknowledge that broadcasters need significant resources to invest in innovations

such as ATSC 3.0, and actively seek ways to promote deployment of broadcast technologies enabling enhanced services to the public.

Given competition levels in the modern media landscape, the OTA broadcast industry can no longer bear the burdens of asymmetric regulation, including sub-optimal ownership structures, scarce investment capital, and delayed technological innovation, while continuing to serve local communities as the FCC expects and that broadcasters want. At some point, broadcasting's lack of competitive scale, regulatory burdens, and infrastructure costs may well lead some broadcasters to conclude that providing content via unregulated platforms, such as online streaming, would be more economically viable. The Commission must consider the real-world consequences of imposing, in a highly competitive marketplace, a burdensome and outdated regulatory regime on an advertising-supported industry with high operational costs that must nonetheless provide audio and video content in markets across the country at no cost to the public. Without changes, there will come a time when the math simply does not add up.

II. THE FCC CORRECTLY DETERMINED IN ITS 2020 REPORT THAT THE AUDIO AND VIDEO MARKETPLACES INCLUDE NOT ONLY BROADCAST STATIONS BUT ALSO MULTICHANNEL PROGRAM DISTRIBUTORS AND ONLINE CONTENT PROVIDERS

In previous communications marketplace reports, the Commission correctly recognized that the audio and video markets were not limited to terrestrial radio stations and TV stations and explicitly recognized broader markets. Its most recent examination of competition in the communications marketplace found that “[t]hree categories of audio providers dominate the audio marketplace in the United States: 1) terrestrial radio

providers, 2) satellite radio, and 3) online audio providers.”⁹ Similarly, the FCC concluded in 2020 that the “video marketplace continues to be dominated by the three categories of participants that have defined the market for the past decade: multichannel video programming distributors (MVPDs), online video distributors (OVDs), and broadcast television stations.”¹⁰ The Commission has no basis for retreating from these clear positions about audio and video competition extending well beyond broadcast stations.

Industry analysts, including Kagan, BIA, Nielsen, and Borrell, and various parties in pending Commission proceedings have documented the disruption and transformation of the U.S. advertising and media markets by online and mobile platforms and content providers, at the expense of traditional media including broadcasting.¹¹ Just last fall,

⁹ *2020 Communications Marketplace Report*, 36 FCC Rcd 2945, 3086 (2020) (2020 Competition Report). See also *id.* at 3087 (explaining that “[c]onsumers can access audio programming from multiple sources, from terrestrial broadcast radio stations” to “entities that use Internet and mobile technologies to deliver audio content,” and identifying the “major participants in today’s marketplace for the delivery of audio programming” as including terrestrial radio broadcasters, satellite radio, and online audio providers). *Accord Communications Marketplace Report*, 33 FCC Rcd 12558, 12630 (2018) (2018 Competition Report) (identifying terrestrial radio broadcasters, satellite radio, and online audio providers as the “major participants in today’s marketplace for the delivery of audio programming”).

¹⁰ 2020 Competition Report, 36 FCC Rcd at 3047. See also *id.* (stating that “consumers can access video programming content from multiple sources,” identifying the “three primary categories of market participants” as MVPDs, OVDs, and broadcast TV stations, and observing that the “past two years have seen a number of changes in terms of competition among these participants”). *Accord* 2018 Competition Report, 33 FCC Rcd at 12596 (identifying TV broadcasters, MVPDs, and OVDs as the “major participants in the marketplace for the delivery of video programming”).

¹¹ See, e.g., Comments of NAB, MB Docket No. 18-349, at 22-23 and n. 89 (Apr. 29, 2019) (NAB 2019 Comments) (discussing several Kagan advertising market reports documenting the shift in ad dollars from traditional media to mobile and internet); BIA Advisory Services, *Local Radio Station Viability in the New Media Marketplace*, at 3-13 (Apr. 19, 2019) (BIA Radio Study), Attachment A to NAB 2019 Comments (documenting that increased competition from other ad platforms and erosion of audience to alternative audio sources have weakened the radio industry’s ability to generate ad revenues); BIA Advisory Services, *The Economic Irrationality of the Top-4 Restriction*, at 1-18 (Mar. 15, 2019) (BIA TV Study),

advertising and broadcast industry analysts reconfirmed that “local advertisers see radio and digital advertising as substitutes” as they “shift[] dollars back and forth between these

Attachment B to 2019 NAB Comments (describing how increased competition for audiences and advertisers impacts local TV stations’ ability to attract both, and thus to invest in their operations, programming, physical plant, and innovative technologies); Comments of NAB, MB Docket No. 18-349, at 64-67, 69-78, 87-92, 95-97, and Attachments F, G, H, I, and J (Sept. 2, 2021) (NAB Supplemental Comments) (discussing analysts’ findings that the pandemic further accelerated the digital transformation of the advertising and media markets and documenting the effects of digital competition on radio and TV stations’ ad revenues and audience levels); Reply Comments of NAB, MB Docket No. 18-349, at 66-68 and Attachment A (Oct. 1, 2021) (NAB Supplemental Reply Comments) (documenting effects of market competition on FM stations’ listenership and ad revenues); Written *Ex Parte* Communication of NAB, MB Docket No. 18-349, at 18-29 (Feb. 16, 2022) (NAB Feb. 2022 *Ex Parte*) (summarizing evidence showing that broadcast stations compete in broad content and advertising markets and that narrow market definitions from an era when radio and TV stations were the only electronic media ignore competitive reality); Written *Ex Parte* Communication of NAB, MB Docket No. 17-318, at 2-13 (May 13, 2022) (NAB May 2022 *Ex Parte*) (providing updated data demonstrating that the advertising and video markets have become even more competitive, with advertisers increasingly accessing myriad digital ad options, including connected TV, and consumers enjoying an almost infinite amount and variety of video content options via a range of devices and platforms). NAB hereby incorporates these submissions into this proceeding.

media.”¹² Leading media analysts similarly have shown the direct competition between radio and TV stations and digital content providers for audiences’ time and attention.¹³

Perhaps most notably, last year the Department of Justice (DOJ) submitted information it thought relevant for the FCC’s consideration in the pending 2018 quadrennial

¹² Joint Comments of Connoisseur Media, LLC, *et al.*, MB Docket No. 18-349 (Sept. 2, 2021) (Joint Comments of 10 Radio Broadcasters), Exhibit B, Report by Gordon Borrell, CEO, Borrell Associates, at 4 (reporting that in the latter half of 2020, 96 percent of radio ad buyers bought social media advertising, and documenting drops in the percentage of active local ad buyers that purchased radio advertising from 2013-2020). This Borrell report additionally documented the continued erosion of radio and TV broadcasters’ share of local advertising due to still increasing competition by the technology platforms. Exhibit B at 2-5 (projecting continued growth in digital media’s share of all local advertising revenue, at the expense of radio and TV stations’ local ad share). Such recent analyses are entirely consistent with a number of economic studies over the years concluding that TV and radio stations in local markets compete with other traditional media outlets and digital ad platforms for advertising revenue. See, e.g., NAB 2019 Comments at 26-27, 55-56 (identifying and briefly describing various studies showing breadth of the advertising market, including studies finding that “online” and “offline” advertising outlets compete with each other); NAB Feb. 2022 *Ex Parte* at 16-29 (discussing record in the pending quadrennial review and how it shows that broadcast stations compete in broad advertising and content markets, contrary to the erroneous claims of a few parties).

¹³ See Joint Comments of 10 Radio Broadcasters, Exhibit A, at 1, Statement of Larry Rosin, President, Edison Research, and attached Powerpoint slides (showing correspondence between the rise in daily time spent listening to audio streaming services and the drop in time spent listening to OTA radio, especially among younger audiences); NAB Supplemental Comments at 72-75 and Attachment F (discussing the rise and fall of audio streaming and OTA radio listening over time, citing Edison Share of Ear and Nielsen data); NAB Supplemental Reply Comments at 64-69 (citing Borrell Associates, Edison Research, and Nielsen data to describe the effects of competing digital content providers on audiences for radio stations, including FM); NAB Supplemental Comments at 87-92 (citing industry analysts, including Nielsen, Deloitte, Leichtman Research, and others, documenting the “vastly fragmenting sea of choice” in the video market, further proving that broadcast TV is only one of three major platforms in the video universe, and determining that digital video is the leading culprit for the declining number of viewers of traditional linear TV); NAB May 2022 *Ex Parte* at 2-13 (updating data from numerous media analysts and industry sources on competition to broadcast TV from growing numbers of subscription and ad-supported video options accessible via myriad devices, and detailing the massive increases in streaming during the pandemic).

ownership review.¹⁴ This information included a study by NERA Economic Consulting (NERA), which NAB had earlier submitted to DOJ.¹⁵ The NERA Study focused on the substitution by local advertisers between advertising on digital media and advertising on broadcast TV stations and whether the relevant market for a competition analysis should be broader than one confined only to broadcast TV stations. Considering the existing economic literature, extensive evidence about dramatic changes across the media landscape, and its new empirical analysis, NERA concluded that: (1) digital platforms compete directly with local TV broadcasters for local advertising dollars, and (2) the relevant market for purposes of analyzing combinations between TV stations in local markets should include advertising on digital platforms, not just local broadcast TV advertising.¹⁶

The NERA Study's empirical evidence showing that advertisers view advertising on digital platforms as substitutable for local TV advertising reconfirms that the Commission here should continue to define the video marketplace as including MVPDs, OVDs, and broadcast TV stations, as it did in its 2020 Competition Report. Indeed, the NERA Study set forth evidence strongly suggesting that "digital advertising delivered over both fixed and mobile broadband networks constitutes a direct substitute for local broadcast advertising, adding to existing competition from cable TV (which competes directly with broadcast for local advertising dollars) and other media."¹⁷

¹⁴ *Ex Parte* Letter from Makan Delrahim, Assistant Attorney General, DOJ, Antitrust Division, to FCC, MB Docket No. 18-349 (Jan. 6, 2021).

¹⁵ *Id.*, attaching, *inter alia*, J. Eisenach, L. Wu, A. Card, R. Kulick, J. Scalf, I. Tasic, and M. Ye, *The Evolution of Competition in Local Broadcast Television Advertising and the Implications for Antitrust and Competition Policy*, NERA Economic Consulting (Oct. 2020) (NERA Study). The NERA Study is attached hereto as Attachment A.

¹⁶ See Attachment A, NERA Study at 3, 27, 37-38.

¹⁷ *Id.* at 2; see also *id.* at 12, 27. NAB discussed the NERA Study at greater length in its September 2021 Supplemental Comments, at pp. 56-59.

In short, the Commission must recognize here and in other proceedings, including the pending broadcast ownership proceedings, that the vast and continuing changes in the consumption of audio and video content and the expenditure of advertising dollars are “paradigm-shifting”¹⁸ and are producing “power shifts” within the media and advertising industries.¹⁹ It also must reject contrary and erroneous claims that have been and will likely continue to be asserted in various proceeding by those parties still wanting the FCC to pretend that broadcast radio and TV stations remain the only relevant electronic media in the 21st century marketplace.

III. THE COVID-19 PANDEMIC ACCELERATED ADVERTISER AND CONSUMER USE OF DIGITAL OUTLETS AND PLATFORMS AND EXACERBATED AD-SUPPORTED BROADCASTERS’ FINANCIAL CHALLENGES

“[T]he COVID-19 story isn’t so much ‘before and after’ as it is ‘before and faster.’”²⁰

Media and advertising analysts agree that the COVID-19 pandemic accelerated preexisting media and entertainment industry trends, especially consumers’ embrace of all things digital,²¹ as well as speeding the digital transformation of the advertising market and

¹⁸ ASCAP’s Response to the DOJ’s June 5, 2019 Request for Public Comments Concerning the ASCAP and BMI Consent Decrees, at 12-13 (Aug. 9, 2019) (stating that traditional TV and AM/FM radio stations first faced new competition from cable/satellite TV and satellite radio, but “today, digital streaming services eclipse all of these offerings”).

¹⁹ PwC *Global Entertainment & Media Outlook 2021-2025, Power shifts: Altering the dynamics of the E&M industry*, at ii, 2, 5 (2021) (PwC 2021 Outlook) (stating that the pandemic hastened the digital transformation of the media and entertainment industries by, *inter alia*, rapidly increasing adoption of e-commerce, thereby buoying internet advertising, and providing further momentum to streaming and video gaming).

²⁰ Deloitte, *Digital media trends survey: COVID-19 accelerates subscriptions and cancellations as consumers search for value*, at 3 (14th ed. 2020) (Deloitte 14th Digital Media Trends) (emphasis in original).

²¹ Deloitte, *Digital media trends: Courting the consumer in a world of choice*, at 2 (15th ed. 2021) (Deloitte 15th Digital Media Trends); see also, e.g., Y. Wurmser, *Mobile Advertising Outlook 2021*, eMarketer (Dec. 16, 2020) (stating that pandemic accelerated behavioral

the broader economy.²² Because the pandemic has constrained in-person activities, both “people and companies” were “accelerated into digital life.”²³

A 2022 Borrell Associates report found that the pandemic “re-energized digital marketing in a dramatic way,”²⁴ while another analyst had earlier compared the pandemic’s effect to “someone toss[ing] a grenade into the ad market” for most advertising sectors, with the notable exception of digital (internet plus mobile).²⁵ Despite the pandemic, digital ad spend increased 12.2 percent year-over-year in 2020 and 35 percent in 2021.²⁶ The U.S. local ad market is now “completely dominated” by digital advertising, which will comprise an

shifts among users, including increased video streaming, gaming and mobile shopping); Deloitte 14th Digital Media Trends at 3 (observing that customer acquisition has accelerated, especially in paid streaming video, music, and gaming subscriptions); PwC 2021 Outlook at ii (stating that COVID-19 “accelerated changes in consumer behavior to pull forward digital disruption” by several years).

²² PwC 2021 Outlook at 2 (explaining that rapid adoption of e-commerce during pandemic promoted internet advertising); MoffettNathanson, *U.S. Digital Advertising: Are Even the Bulls Too Low?* (Sept. 29, 2020) (raising its online advertising forecasts due to expected increase in dollars going toward online ads as result of the rapid pace of e-commerce growth during pandemic); see also, e.g., Nicole Perrin, *US Digital Ad Spending 2021*, eMarketer (Apr. 14, 2021); Suzanne Vranica, *Google, Facebook and Amazon Gain as Coronavirus Reshapes Ad Spending*, Wall Street Journal (Dec. 1, 2020).

²³ K. Westcott, et al., *2002 Digital media trends, 16th edition: Toward the metaverse*, Deloitte (Mar. 28, 2022) (Deloitte 16th Digital Media Trends).

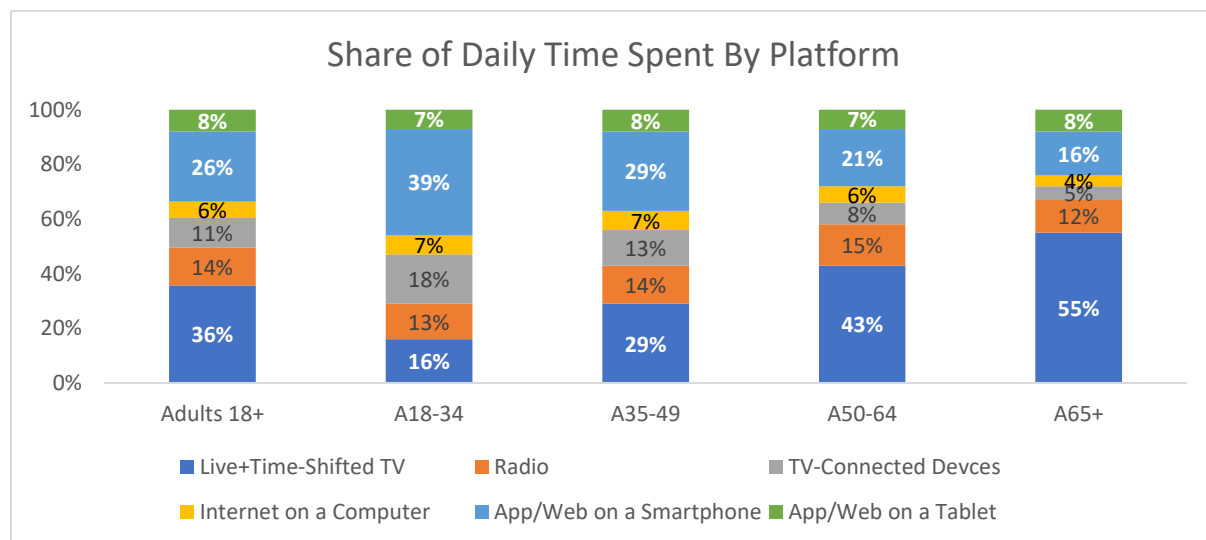
²⁴ Borrell Associates, *2022 Benchmarking: Local Media’s Digital Revenues*, at 5 (Apr. 20, 2022) (Borrell 2022 Benchmarking Report).

²⁵ D. Baine, *U.S. ad market does better in pandemic than in Great Recession*, Kagan, a media research firm within S&P Global Market Intelligence (Mar. 1, 2021) (2021 Ad Market Report) (stating that COVID-19 shocked most ad sectors, including broadcasting, but continued strength in digital meant the overall decline in the ad market was less severe than in the last recession); accord N. Perrin, *US Digital Ad Spending 2021*, eMarketer (Apr. 14, 2021) (explaining that advertisers pulled back in the first half of 2020, but digital had a strong recovery in the second half while traditional media faced steep spending drops).

²⁶ M. Graham, *Digital ad spend grew 12% in 2020 despite hit from pandemic*, CNBC (Apr. 7, 2021) (citing PwC report for the Interactive Advertising Bureau (IAB)); *Digital Advertising Soared 35% to \$189 billion in 2021 According to the IAB Internet Advertising Revenue Report*, iab.com (Apr. 12, 2022) (IAB Ad Report Press Release) (citing report by PwC).

even higher share of the local and national ad market in the coming years.²⁷ Obviously, the accelerated digital dominance of the advertising market presents formidable challenges to ad-supported outlets such as local radio and TV stations.

The COVID-19 pandemic also increased already-strong consumer usage of digital outlets, with a concomitant decline in consumers' share of time spent with traditional media.



Source: Nielsen Total Audience Report Q2 2020

As shown by the graphic, Nielsen estimated that, in the second quarter of 2020, adults 18+ spent only half of their daily media time with traditional platforms (linear TV, including broadcast/cable/satellite, and radio), and spent half of their time with digital platforms (internet on a computer, app/web on smartphones and tablets, and TV-connected devices, including game consoles and internet-connected devices). But adults ages 18-34 and 35-49 spent just 29 and 43 percent, respectively, of their daily media time on traditional platforms and 71 and 57 percent, respectively, of their time with digital platforms. Even those ages

²⁷ 2021 Ad Market Report (estimating that local internet and mobile ads will generate about two-thirds of total local advertising in 2021, and that by 2030, the digital sector could comprise nearly 80 percent of local advertising); accord Borrell 2022 Benchmarking Report at 4 (forecasting that local digital advertising will account for two-thirds of all local ad spending in 2022 and projecting that digital will account for 72 percent by 2025).

50-64 spent 42 percent of their daily media time with digital platforms, and adults 65+ spent more time with apps/web on smartphones than with radio (16 percent versus 12 percent). The share of media time consumers devoted to digital platforms, moreover, grew significantly just from Q2 2018 to Q2 2020.²⁸

Other analysts' estimates of time spent with digital media are notably higher. eMarketer estimated that U.S. adults spent 58.9 percent of their total media time with digital in 2020 and 61.1 percent of that time in 2021. It further projects consumers' share of total media time spent with digital to rise to 62.4 percent this year and to 64.9 percent by 2024.²⁹

Perhaps unsurprisingly given the time consumers spend with digital media, 79 percent of U.S. adults previously reported going online "almost constantly" or "several times a day," with 85 percent going online at least daily.³⁰ Thirty-one percent of adults said they go online "almost constantly," with 48 percent and 42 percent of those ages 18-29 and 30-49, respectively, reporting that they are almost constantly online.³¹

²⁸ In Q2 2018, for example, adults 18+ spent 59 percent of their daily media time with linear TV and radio and 41 percent of their time with digital platforms; adults ages 18-34 spent 42 percent of their time with traditional media and 58 percent of their time with digital platforms; and adults ages 35-49 spent 52 percent of their time with traditional media and only 48 percent of their time with digital platforms. BIA TV Study at 10. Nielsen has not released a Total Audience Report for Q2 2021.

²⁹ S. Lebow, *Shifting patterns mean US adults are spending more time with media on entertainment devices*, eMarketer (May 17, 2022) (explaining that time spent with internet connected devices ballooned by over 35 percent in 2020 during the pandemic lockdowns and has continued to grow at a slower pace).

³⁰ A. Perrin and S. Atske, *About three-in-ten U.S. adults say they are "almost constantly" online*, Pew Research Center (Mar. 26, 2021).

³¹ *Id.* Twenty-eight percent of White adults said they are almost always online, compared to 37 percent of Black adults and 36 percent of Hispanic adults. *Id.*

Deloitte reported in 2020 that U.S. households owned an average of seven digital devices with screens (smartphones, tablets, smart TVs, laptops) for accessing video and audio content.³² The pandemic caused consumers to increase their subscriptions to video streaming services,³³ leading Nielsen to proclaim that the media landscape had been “permanently altered” by video streaming’s increased share of media consumption.³⁴ In its 2021 report on media and entertainment, PwC stated broadly and “with certainty that a significant proportion of [consumers’] habits accrued” during the pandemic “will endure.” Many of the trends that were already evident, including the growth of e-commerce, the “relentless” rise of streaming, and the “growing influence” of gaming and user-generated content, gained further momentum and, according to PwC, would increasingly lead to power shifts within the industry.³⁵ Later in 2021, a Deloitte survey found that 46 percent of consumers reported spending *more* time on online entertainment than six months previously, with 48 percent spending about the same amount of time and only six percent spending less time with online entertainment.³⁶ Clearly, the end of lockdowns did not result in a return to pre-pandemic media consumption habits.

³² Deloitte 14th Digital Media Trends at 4.

³³ *Id.* at 7-8.

³⁴ Nielsen Insights, *Tops of 2020: Nielsen Streaming Unwrapped* (Jan. 12, 2021).

³⁵ PwC 2021 Outlook at 5. PwC reconfirmed these findings in its recently released 2022 report. See PwC, *Fault lines and fractures: Innovation and growth in a new competitive landscape, Global Entertainment & Media Outlook 2022-2026*, at 4 (2022) (reporting “no rapid return to the pre-COVID era” in consumption of digital content and services, and instead finding that more consumption and leisure activities are “happening online and in digital spaces,” thereby further buoying digital advertising).

³⁶ K. Westcott, *et al.*, *Streaming video on demand, social media, and gaming trends: Digital media trends*, Deloitte, at 2-3 (15th ed. Fall pulse survey, Oct. 2021) (Deloitte Oct. 2021 Report) (reporting that consumers across generations have been spending more time watching TV shows and movies at home and browsing the internet, although Generation Z ranks playing video games as their preferred form of entertainment).

Given that ad-dependent media outlets in this pandemic-altered ecosystem still must earn revenue by “selling” their audiences to advertisers, the accelerated splintering of audiences and the rapid diversion of consumers and advertisers toward digital platforms inevitably impacts broadcast stations’ financial well-being and marketplace competitiveness. Below, NAB further details how the accelerated digital transformation of the media and advertising markets just since the end of 2019 has placed additional, substantial competitive pressures on local radio and TV broadcasters.³⁷

IV. SIMILAR TO THE EFFECTS OF THE GREAT RECESSION, THE PANDEMIC AND ASSOCIATED ECONOMIC DOWNTURN DEALT A SERIOUS BLOW TO THE RADIO INDUSTRY, WITH STATIONS STRUGGLING TO REGAIN THEIR PRE-COVID POSITION IN THE MARKETPLACE

In its last competition report, the Commission found that “advertising revenue in the radio industry never fully recovered from the decline in advertising experienced during the recession following the 2008 financial crisis.”³⁸ This report also noted a predicted “substantial” drop in radio stations’ ad revenues for 2020, due to the pandemic-related recession, and cited analysts’ projections that AM/FM stations would face a “tougher road to recovery” from this recession than other outlets.³⁹ Subsequent marketplace developments have proven the FCC’s 2020 report to be correct.

Since the release of that competition report, NAB has provided the FCC extensive evidence detailing the continuing digital transformation of the media and advertising markets and how it has splintered radio stations’ audiences, harmed their ability to earn

³⁷ See Public Notice at 8-9 (asking about the pandemic’s effects on video and audio markets).

³⁸ 2020 Competition Report, 36 FCC Rcd at 3090-91 and Fig. II.E.3.

³⁹ *Id.* at 3090.

adequate ad revenues, and undermined the competitive viability of many stations.⁴⁰ Below, NAB further updates information pertaining to these matters and provides additional data about the broadcast industry's current competitive position, especially given the pandemic, associated recession, and related changes in consumer and advertiser behavior.

A. Consumer Adoption of Digital Devices and Competing Audio Services Continues Apace

As NAB previously documented, local radio stations face intense and increasing competition for audiences from an expanding universe of content providers accessible via virtually ubiquitous digital devices. These trends continue to pick up pace and clearly show that consumers' devices profoundly affect their content choices.

As of early 2022, 88 percent of the total U.S. population ages 12+, or 252 million people, owned smartphones, up from 10 percent in 2009.⁴¹ Smartphone ownership is even higher among younger people; in 2021, 96 percent of adults ages 18-29 reported owning a smartphone, as did 95 percent of those ages 30-49.⁴² Fifty-three percent of those ages 12+, or 152 million people, also owned tablets, and 20 percent (or 57 million people) had internet-connected watches, up from only nine percent in 2017.⁴³ Smart speaker ownership is rising rapidly. By early 2022, 35 percent of the 12+ U.S. population (100 million people)

⁴⁰ See NAB Supplemental Comments at 69-84 and Attachments F, G; NAB Supplemental Reply Comments at 63-69 and Attachment A; NAB Feb. 2022 *Ex Parte* at 16-29.

⁴¹ Edison Research, *The Infinite Dial 2022*, at 6 (Mar. 23, 2022) (Infinite Dial 2022).

⁴² Andrew Perrin, *Mobile Technology and Home Broadband 2021*, Pew Research Center (June 3, 2021).

⁴³ Infinite Dial 2022 at 7-8.

owned a smart speaker, compared to only seven percent in 2017, with owners now having more smart speakers in their households.⁴⁴

Smart speaker owners reported increased usage of their devices to access music, entertainment, and news as a result of the pandemic.⁴⁵ In fact, the average music listener (ages 13+) in 2020 owned 6.5 devices for music and used 3.7 devices in a typical month.⁴⁶ In contrast to the growth of newer devices, ownership of AM/FM radios in the home has fallen over time.⁴⁷

These changes in technology and ownership of technology have fundamentally altered the public's audio (and video) consumption habits. When comparing the weekly reach of various platforms among U.S. adults 18+ in late 2020, apps/web on a smartphone nearly equaled the reach of radio and exceeded the reach of all linear TV across demographic groups.⁴⁸ The virtually ubiquitous smartphone tops the list of devices used for music listening, followed, in order, by in-car radios, desktop/laptop computers, smart speakers, smart TVs, and standalone radios.⁴⁹ Beyond music, mobile listening to spoken-

⁴⁴ One-third of smart speaker owners now have three or more smart speakers, compared to only 11 percent in 2018. *Id.* at 9, 11.

⁴⁵ NPR, Press Release, *Use of Smart Speakers in the U.S. Increases During Quarantine* (Apr. 30, 2020).

⁴⁶ Nielsen Music and MRC Data, *US Music 360*, at 43 (2020) (2020 Nielsen Music 360) (defining "music listeners" as those who listened to music within the past 12 months, audio or video). *Id.* at 6.

⁴⁷ Infinite Dial 2022 at 12-13 (reporting that from 2008-2022, the number of homes with no radios increased from four to 39 percent and that 57 percent of the households of those ages 12-34 lack radios).

⁴⁸ See *The Nielsen Total Audience Report*, at 4 (June 2021) (reporting Q4 2020 data).

⁴⁹ 2020 Nielsen Music 360 at 44 (listing top devices for music listening, among music listener device owners).

word audio increased 278 percent from 2014-2021.⁵⁰ Last year, Edison Research found that 30 percent of all audio listening in the U.S. was done via a mobile device, an increase of 67 percent since 2014.⁵¹ And in 2020, the share of listening (ages 13+) being done via digital devices of various types, rather than traditional devices, surpassed half of all listening for the first time, reaching 53 percent.⁵²

While AM/FM radio remains strong among in-car media users, consumers continue to incorporate other options in vehicles, including satellite radio and digital audio. About half (49 percent) of the 12+ U.S. population have listened to online audio in cars through their mobile phones, up from just five percent in 2010.⁵³ Among those ages 18+ who have driven or ridden in a vehicle in the last month: (1) 22 percent now own an in-dash information and entertainment system, up from a mere six percent in 2013, and (2) 28 percent have either Apple CarPlay or Android Auto in their primary vehicle.⁵⁴ The refinement and increasing

⁵⁰ NPR, *New Report From NPR & Edison Research Shows Growth in Spoken Word Audio*, Press Release (Nov. 11, 2021).

⁵¹ L. Venta, *Edison Research: 30% of all Audio Listening in the U.S. now done on Mobile Device*, radiolNSIGHT (Mar. 4, 2021); RAIN News, *30% of all American audio listening happens via mobile, on track to surpass radio receivers* (Mar. 8, 2021). Among listeners ages 13-34, 46 percent of total daily audio consumption is via a mobile device, with only 20 percent via an AM/FM radio. *Id.*

⁵² Brad Hill, *Over 50% of American teen/adult listening was on digital devices*, RAIN News (July 21, 2020) (citing Edison Share of Ear data). “Traditional” devices include AM/FM receivers, SiriusXM receivers, CD players, turntables, and TV channels. “Digital devices” include smartphones, computers, internet-connected TVs, and smart speakers.

⁵³ Infinite Dial 2022 at 48.

⁵⁴ *Id.* at 45-47 (also reporting that, among this 18+ auto driving/riding demographic, 53 percent use owned digital music and 32 percent use podcasts in the car).

deployment of voice controls in vehicles is making it simpler for drivers and passengers to select a variety of audio options other than traditional radio.⁵⁵

Notably, digital devices are multi-purpose devices that permit consumers to access different types of audio content (including radio, streaming services, owned music, and audiobooks), and also to switch between audio and video content.⁵⁶ Audio and video services do compete against each other for audiences' time and attention, as almost two in three podcast listeners report replacing time previously spent watching TV with podcasts.⁵⁷ Audio and video services also now blend together. As Nielsen explained, music "is no longer just about listening" and will continue to become more of a visual experience as consumers' engagement with music videos, social media, short video clips, and virtual live events grows.⁵⁸ The silos between audio and video are continuing to break down, thereby expanding the range of outlets against which radio and TV stations must compete.

Predictably in light of consumers' rapid adoption of myriad digital devices, audio (and video) streaming has exploded in popularity. Sixty-seven percent of the U.S. 12+ population (192 million people) now listen at least weekly to online audio (up from two percent in 2000

⁵⁵ In a recent survey asking new car buyers which information/entertainment features were "very important" in a vehicle, 40 percent identified "voice commands." The highest ranked feature was Bluetooth, identified by 76 percent of respondents. Radio Ink, *Survey Says Radio Listening on the Decline* (May 11, 2022).

⁵⁶ See, e.g., A. Washenko, *Apple Music arrives on Samsung Smart TVs*, RAIN News (Apr. 28, 2020); B. Hill, *Spotify opens the door to (exclusive) video podcasting*, RAIN News (Oct. 22, 2021).

⁵⁷ M. Paris, *From Classic Rock to Crime Junkie, Audio is Filling our Daily Routines*, SXM Media (Dec. 2, 2021) (citing findings of study by SMX Media, in partnership with Edison Research and GroupM); accord Inside Radio, *Podcasting Is Growing Faster But Streaming Audio Audience Is Bigger* (Sept. 3, 2019) (citing Nielsen data showing that podcast and streaming audio consumers spend significantly less time watching TV than the average consumer).

⁵⁸ 2020 Nielsen Music 360 at 13.

and 60 percent in 2020), and 73 percent (209 million people) listen monthly (rising from five percent in 2000 and 68 percent in 2020), with higher percentages of those under age 55 listening at least monthly.⁵⁹ Time spent on digital audio listening grew 8.3 percent in 2020, with further gains in digital audio listening time projected through 2023.⁶⁰ Audio on-demand song streaming rose 12.6 percent from 2020 to 2021, while total song streaming (audio and video) increased 9.9 percent, reaching 1.13 trillion last year.⁶¹ The vast majority of music listeners stream. According to Nielsen, 93 percent of U.S. music listeners ages 13+ streamed music using a music streaming service in 2020.⁶² Again showing the melding of audio and video, YouTube is the leader by a very large margin among free music streaming services. In a typical month among music listeners, slightly more stream music videos online than stream audio songs/playlists or listen to AM/FM radio over the air.⁶³

A record number of Americans now subscribe to paid on-demand streaming services. According to RIAA, the number of full-service paid subscriptions averaged 84.0 million in 2021, up from 60.4 million in 2019 and only 35.3 million in 2017.⁶⁴ Other audio subscriber

⁵⁹ Infinite Dial 2022 at 34-36 (reporting that, among those ages 12-34 and 35-54, 87 percent and 81 percent, respectively, listen monthly to online audio).

⁶⁰ RAIN News, *Digital audio listening +8.3% in 2020. More increase projected for 2021.* (Feb. 9, 2021); RAIN News, *Digital audio listening time projected to grow through 2023, as radio dips* (June 7, 2021) (citing eMarketer research).

⁶¹ MRC Data and Billboard, *Year-End Report U.S. 2021*, at 3, 5 (Jan. 6, 2022).

⁶² 2020 Nielsen Music 360 at 51. Even higher numbers of African-American (96 percent) and Hispanic (96 percent) music listeners streamed music (audio and/or video). African-American and Hispanic music listeners also spent more time than other music listeners streaming music videos online and watching short music video clips on social video sites. *Id.* at 132, 137.

⁶³ 2020 Nielsen Music 360 at 10, 66; accord MRC Data, *U.S. Music 360: Sneak Preview*, at 6-8 (2021).

⁶⁴ Joshua Friedlander, *Year-End 2021 RIAA Revenue Statistics*, at 2 (2022).

estimates are considerably higher,⁶⁵ with eMarketer estimating 121.9 million paid digital audio subscribers in the U.S. in 2021.⁶⁶ Edison Research reported last year that 48 percent of Americans ages 13+ subscribed to a paid audio service, up from 23 percent in 2015.⁶⁷ And millions more listen to various free and ad-supported streaming services offered by numerous providers.⁶⁸

In the past few years, SiriusXM also has become a more formidable competitor in the audio marketplace. Since its inception, satellite radio has offered hundreds of channels of audio programming across all markets in the U.S., and it continues to add subscribers.⁶⁹ Last year, SiriusXM began offering a small number of free, ad-supported channels on its satellite radio service, thereby adding to competition for advertising in the audio marketplace.⁷⁰ By acquiring Pandora, Stitcher, and other companies, SiriusXM significantly expanded into streaming and podcasting and has acted to ensure consumers can access its content via myriad platforms and devices not only in vehicles but also at home and in

⁶⁵ RIAA reports the average number of subscriptions over the year, counts multi-user plans as a single subscription, and excludes limited-tier subscriptions (services limited by factors such as catalog availability, product features, or device/access restrictions). This may explain why RIAA's estimates as to the number of paid subscriptions are lower than other estimates.

⁶⁶ S. Lebow, *The number of US paid digital audio subscribers is rising faster than previously expected*, eMarketer (Aug. 30, 2021).

⁶⁷ Edison Research, *2021 Top 10 Findings*, youtube.com (Dec. 20, 2021) (citing Share of Ear Q3 2021).

⁶⁸ See, e.g., J. Wilson and G. Zamora, *The Best Free Online Streaming Music Services for 2022*, pcmag.com (Dec. 1, 2021); B. Hill, *Spotify's U.S. ad-supported listeners heading for 50-million*, RAIN News (Oct. 19, 2021).

⁶⁹ SiriusXM Pandora, *SiriusXM Reports Fourth Quarter and Full Year 2021 Results*, News Release, at 3 (Feb. 1, 2022) (SiriusXM 2021 Report) (stating that SiriusXM added 1,152,000 net new self-pay subscribers in 2021, a 27 percent increase from the 909,000 added in 2020).

⁷⁰ M. Keys, *SiriusXM launches handful of free, ad-supported channels*, thedesk.net (Sept. 8, 2021).

offices.⁷¹ SiriusXM reached 82 percent penetration in new vehicles in 2021, up from 78 percent in 2020. An increasing number of these new vehicles include 360L, the platform that combines streaming and satellite-delivered content, thus further increasing competition to AM/FM radio in cars.⁷²

In addition to the myriad other audio choices for music and information, consumers' podcasting options continue to grow. As of February 2022, consumers had over two million podcast series and nearly 92 million episodes to choose from.⁷³ eMarketer estimated that 117.8 million Americans listened to podcasts at least once a month in 2021, and projected 144.6 million monthly podcast listeners by 2025.⁷⁴ An early 2022 survey reported that 38 percent of the U.S. population ages 12+ listen to podcasts monthly, and 26 percent listen at least weekly.⁷⁵ Almost one-quarter (23 percent) of Americans get news from podcasts.⁷⁶ Notably, from Q4 2016-Q4 2021, podcasting's share of ad-supported audio listening among those ages 18+ rose from three to 11 percent.⁷⁷

⁷¹ For example, SiriusXM connected with Amazon to ensure their 300+ channels would be available by a simple voice command to Alexa. F. Jacobs, *10 Reasons Why SiriusXM Is Broadcast Radio's Public Enemy #1*, jacobsmedia.com (July 14, 2020).

⁷² SiriusXM 2021 Report at 1.

⁷³ Nielsen, *Podcasting Today*, at 5 (May 11, 2022).

⁷⁴ Inside Radio, *eMarketer: Podcast Listening Will Grow 10% In 2021* (Aug. 27, 2021).

⁷⁵ Infinite Dial 2022 at 56, 67. Weekly podcast listeners average eight podcasts per week, and younger consumers listen to podcasts more frequently, with 50 percent of those ages 12-34 listening at least monthly. *Id.* at 58, 68. The ethnicity of podcast listeners is consistent with the U.S. population overall. *Id.* at 61. In 2021, Edison Research found that 36 percent of U.S. Latinos age 18+ listened to podcasts monthly, a 44 percent increase over 2020. B. Hill, *Surge in Latino podcast listening the #1 "Top Finding" in 2021 from Edison Research*, RAIN News (Dec. 20, 2021) (also citing Edison's finding that "Black podcast listeners have strong connections with podcasts," especially those with Black hosts).

⁷⁶ M. Walker, *Nearly a quarter of Americans get news from podcasts*, Pew Research Center (Feb. 15, 2022).

⁷⁷ B. Hill, *Over five years: Terrestrial radio -13%, podcasting +266% (Cumulus/Edison)*, RAIN News (Apr. 18, 2022).

This widespread consumer adoption of other audio (and video) options has splintered the formerly “mass” media audiences for broadcast radio (and TV). AM/FM radio’s share of listening by Americans 13+ has fallen over time, as broadcasters documented in other proceedings.⁷⁸ This decline clearly was exacerbated by the pandemic, which reduced the time consumers spent (and still spend) in their cars,⁷⁹ but it also reflects the increase in audiences’ time spent on streaming audio, podcasts, satellite radio, music videos on YouTube, short video clips on social media sites, audiobooks, and still other options.⁸⁰ As Edison Research observed, the “pandemic has had an influence on our listening, but if anything, it has really just accelerated some trends that we have seen over the past few years.”⁸¹

Given this overwhelming evidence, the Commission must reconfirm that AM/FM radio operates in a larger audio marketplace and has multiple and growing competitors for

⁷⁸ See, e.g., Joint Comments of 10 Radio Broadcasters at 7-19. Exhibit A to these Joint Comments provided detailed Edison Research Share of Ear® data documenting audio listening trends since 2014. Larry Rosin, President of Edison Research, stated that the downward trend in AM/FM listening since 2019 was consistent with prior years and “likely to persist into the future absent some significant changes in the audio marketplace.” *Id.*, Exh. A at 1. Accord NAB Supplemental Comments at 74-75 and Attachment F (providing Edison Research and Nielsen data on AM/FM radio’s falling listening share and time spent listening since 2014-2015, including among different age groups); NAB Supplemental Reply Comments at 67-68 (providing Nielsen data on FM listenership specifically). See also Jacobs Media, *Radio: A Return to “Normal?”* TechSurvey 2022 (2022) (documenting pressures on levels of radio listening, especially among younger people).

⁷⁹ Jacobs Media’s recent TechSurvey found that “core radio users” listened to broadcast radio less in the last year “mostly because they spend less time in the car.” R. Stine, *TechSurvey 2022: Pandemic Drives Down Radio Listening*, radioworld.com (May 16, 2022).

⁸⁰ See, e.g., Inside Radio, *Edison’s Share Of Ear Shows Podcasting Capturing More Listening Time* (Mar. 11, 2021); 2020 Nielsen Music 360 at 21.

⁸¹ Inside Radio, *Edison’s Share Of Ear Shows Podcasting Capturing More Listening Time* (Mar. 11, 2021).

audiences' time and attention. The other core metric of competition – advertising dollars – addressed below proves the same point.

B. The “Great Recession” and the “Great Pandemic” Both Delivered Serious Economic Blows to the Radio Industry

As NAB previously documented, the coronavirus pandemic's shock to the advertising market significantly harmed local radio stations.⁸² Unfortunately, the radio industry's experience following the pandemic recession may mirror stations' struggles after the 2008-2009 recession – a modest recovery in advertising revenue but struggling to return to pre-recession revenue levels.

Given their dependence on advertising revenues and the source of those revenues, the radio industry was particularly hard hit by the COVID-19 pandemic and subsequent economic downturn. BIA previously estimated that 75-80 percent (or more in some markets) of total OTA radio ad revenue is attributable to local businesses,⁸³ which were shuttered or restricted and could not afford to advertise. When ad dollars are cut, radio stations feel the impact immediately, and those are revenues the stations will never be able to recoup, as airtime cannot be resold after-the-fact. According to Radio Ink, radio company CEOs reported revenue drops anywhere between 40 to 70 percent during the spring of 2020.⁸⁴ Unsurprisingly, numerous radio broadcasters of all sizes were forced to lay off or furlough

⁸² See, e.g., NAB Supplemental Comments at 75-77 and Attachment G; NAB Supplemental Reply Comments at 66-67 and Attachment A.

⁸³ See BIA Advisory Services, *Market Assessment and Opportunities for Local Radio: 2018-2022*, at 18 (Apr. 2018). See also Ted Johnson, *Local Media Outlets to D.C. Lawmakers: Consumers Are Leaning On Us During Coronavirus Crisis, But We Need A Lifeline*, Deadline (Apr. 28, 2020) (stating that the “lion's share” of radio stations' ad revenues comes from local businesses affected by coronavirus shutdown and economic disruption).

⁸⁴ Radio Ink, *Just How Bad Is The Ad Revenue Decline?* (May 7, 2020).

employees, reduce salaries, or even go silent.⁸⁵ A “record number of radio stations signed off” the air in April 2020,⁸⁶ and according to the FCC, there were 180 fewer full power commercial AM/FM stations at the end of 2021 than at the end of 2019.⁸⁷ Even noncommercial radio stations were forced to cut staff, reduce salaries, and eliminate some programming production, due to large declines in underwriting revenue after businesses that supported the stations closed or stopped promoting events.⁸⁸

Examining pre- and post-pandemic advertising revenue shows some of the radio industry’s challenges even prior to the pandemic recession, which only have been exacerbated by recent events.⁸⁹ The Commission previously found that radio industry ad revenues never fully recovered from the drop experienced during the 2008-2009

⁸⁵ According to the Bureau of Labor Statistics, total broadcasting jobs in the U.S. declined by 9.8 percent from June 2019 to June 2021. Inside Radio, *Bureau Of Labor Statistics Shows Broadcasting Added Back 700 Jobs Since June 2020* (July 8, 2021). NAB previously documented the range of radio broadcasters, including small market and diverse radio operators, that had laid-off employees, cut salaries, or went off the air in 2020. See, e.g., Reply Comments of NAB, GN Docket No. 20-60, at 5-6 and note 15 (May 28, 2020).

⁸⁶ Inside Radio, *April Saw A Big Spike In Stations Going Silent, Many Cited Coronavirus As The Culprit* (Apr. 29, 2020) (reporting that 35 radio stations went dark in April 2020, bringing the total number of stations off the air to 369).

⁸⁷ FCC, *Broadcast Station Totals as of December 31, 2021*, Public Notice, DA 22-2 (Jan. 4, 2022) (reporting 11,185 full power commercial AM/FM stations); FCC, *Broadcast Station Totals as of December 31, 2019*, News Release (Jan. 3, 2020) (reporting 11,365 full power commercial AM/FM stations).

⁸⁸ See, e.g., L. Edelman, *WBUR cuts more than 10% of staff as revenue shrinks*, bostonglobe.com (June 17, 2020) (discussing budget cuts and layoffs at public radio stations in Boston, Chicago, and Minnesota). A recent survey found that the coronavirus and economic disruption led to the loss of local news at 16.9 percent of responding noncommercial and 4.9 percent of responding commercial radio stations in 2021. B. Papper and K. Henderson, *COVID recovery is slow for the broadcast news industry*, Radio Television Digital News Ass’n and Newhouse School at Syracuse University, rtdna.org (May 17, 2022).

⁸⁹ 2020 Competition Report, 36 FCC Rcd at 3090-91 and Fig. II.E.3 (showing that radio revenues were about \$22 billion in 2005 and 2006, compared to BIA’s recent projections of around \$15 billion for 2026).

recession.⁹⁰ According to Borrell and Associates' recent report on digital advertising in local markets, the amount of money local businesses plowed into digital advertising skyrocketed following the "Great Recession" over a decade ago and the "Great Pandemic" delivered another economic trigger, "prompting advertisers to take even more money from longtime forms of marketing and spend them on digital media."⁹¹ NAB has documented in detail the significant impact that the shift in ad dollars away from traditional media outlets, including broadcast radio, and toward other advertising options, especially digital, have had on the revenues of the radio industry, both AM and FM.⁹²

As the FCC predicted, radio station ad revenue dipped notably from 2019 to 2020 due to the pandemic,⁹³ while digital audio advertising revenue grew 13 percent in 2020 and soared 57.9 percent in 2021.⁹⁴ Podcast advertising alone reached over \$1.3 billion in 2021 and is projected to reach \$2.2 billion in 2023 and exceed \$3 billion by 2026.⁹⁵ And major audio and tech platforms continue to enhance their position in the advertising market.⁹⁶

⁹⁰ 2020 Competition Report, 36 FCC Rcd at 3090-91 and Fig. II.E.3 (depicting radio station ad revenues from 2004-2020 and showing that radio revenue never again reached the levels earned in the 2004-2006 period).

⁹¹ Borrell 2022 Benchmarking Report at 4-5.

⁹² See, e.g., NAB Supplemental Comments at 75-78 and Attachment G; NAB Supplemental Reply Comments at 66-67 and Attachment A.

⁹³ 2020 Competition Report, 36 FCC Rcd at 3090 (projecting a "substantial" decline in radio station ad revenue for 2020).

⁹⁴ RAIN News, *Digital Audio Advertising revenue grew 13% in 2020 (IAB/PwC Internet Advertising Revenue Report)* (Apr. 8, 2021); Inside Radio, *Digital Audio Ad Spending Soared 58% Last Year, Growing Faster Than Any Other Media* (Apr. 12, 2022) (citing report prepared by PwC for IAB).

⁹⁵ R. Benes, *Podcasts will account for more than one-fourth of digital audio ad spending*, eMarketer (Apr. 25, 2022).

⁹⁶ See, e.g., RAIN News, *Amazon Audio Ads collaborates with GroupM to benefit clients* (May 20, 2021) (reporting that Amazon Audio Ads is working with GroupM, the largest ad buyer in the world, to promote digital audio advertising and give the agency's clients favorable

Due to the ad market's domination by the digital giants, the radio industry's share of the local ad market has been diminished over time.⁹⁷

Advertising-dependent local broadcast stations cannot expend resources they do not have to improve their services offered to local communities or even, in some cases, to maintain the same level of services they provided in the past. NAB has explained, even prior to the pandemic, that many radio stations in mid-sized and small markets and in unrated areas experienced problems generating revenue sufficient to cover their substantial fixed costs, given the smaller business base and limited advertising revenues in those markets.⁹⁸ Full power commercial radio stations in mid-sized and small Nielsen Audio markets consistently earn but a small fraction of the advertising revenues earned by stations in the largest markets. For example, in 2021, the average radio station in the smallest Nielsen Audio markets (201-253) earned only 7.5 percent of the amount of ad revenue earned by the average radio station in the top-10 markets. Similarly, the average radio station in

access and terms); RAIN News, *SiriusXM combines acquired sales orgs to create SXM Media, reaching 150M listeners* (May 10, 2021) (reporting that the sales divisions of SiriusXM, Pandora, and Stitcher are being combined to create an entity reaching 150 million listeners across satellite, streaming and podcasting, which will offer audio advertising solutions and scale to clients); B. Hill, *Pandora puts interactive voice ads into beta*, RAIN News (July 24, 2020) (reporting on Pandora's plans to test and then scale interactive ads in streaming audio); B. Hill, *Google advances its programmatic audio buying tools*, RAIN News (Aug. 18, 2020) (reporting on how Google "raised its game" in programmatic audio).

⁹⁷ In 2021, Kagan estimated that radio stations' share of all local U.S. ad revenues had fallen to 8.8 percent in 2020, and projected that by 2030, radio's share of the local ad market would drop to 5.5 percent, with digital's share reaching 79.4 percent. See 2021 Ad Market Report. Last fall, ten radio broadcasters filed in another proceeding a report from Borrell Associates providing data and analysis on the ad market, which again showed the continued erosion of broadcasters' share of local advertising due to the still increasing competitive presence of the large tech platforms in local ad markets. See Joint Comments of 10 Radio Broadcasters at Exhibit B.

⁹⁸ See, e.g., NAB 2019 Comments at 31-33; BIA Radio Study at ii, 31-34.

markets 76-100, 101-150, and 151-200 earned only 13.9 percent, 12.3 percent, and 11.2 percent, respectively, of the average station in the ten largest markets.⁹⁹

Fixed costs are basic ones that must be met to run a station, including engineering, programming (including news), advertising and promotion, sales, and general/administrative costs. Radio broadcasters that cannot, or barely, cover their fixed costs are unable to invest in improving their stations' programming, staff, or technical facilities. Their stations also lack the resources to expand and improve their digital advertising products or to hire, train, and retain staff with expertise in selling digital advertising, both of which are necessary to increase digital ad revenues.¹⁰⁰ Such radio stations necessarily play a limited competitive role in their local markets. The decline in radio industry advertising revenues during the pandemic, and the projected slow recovery in ad revenues going forward, only will exacerbate many stations' struggles to cover their fixed costs and provide viable local services. AM stations, whose sustainability the Commission has described as "threatened" and which have "struggled for decades with a steady decline in listenership," may face even greater threats in the future.¹⁰¹

Given the evidence presented here and in other pending proceedings, the Commission must confirm in its upcoming competition report that AM/FM radio is only one participant in a broader advertising market dominated by large digital ad platforms and is

⁹⁹ See Attachment B, Radio Station Advertising Revenues by Market Rank. See also NAB Supplemental Comments at Attachment C (showing similarly wide disparities between radio station revenues across markets in 2020); BIA Radio Study at 14 (showing such disparities in 2018).

¹⁰⁰ NAB Feb. 2022 *Ex Parte* at 38-40; see also Borrell 2022 Benchmarking Report at 17, Chart 2.6.

¹⁰¹ *Revitalization of the AM Radio Service*, Notice of Proposed Rulemaking, 28 FCC Rcd 15221, 15222 (2013); *All-Digital AM Broadcasting*, Notice of Proposed Rulemaking, 34 FCC Rcd 11560 (2019).

only one content provider in a media market with seemingly unlimited listening (and viewing) options for consumers.

C. The Broadcast Industry Competes on an Unequal Playing Field Against Much Larger Competitors and Needs Greater Scale and Investment to Continue Offering Effective Local Service to Communities of All Sizes

Although the Commission has found that AM/FM broadcasters compete in the audio market against satellite radio and online audio providers, as well as other terrestrial broadcasters, radio stations do not compete on an even remotely level playing field. The Commission needs to recognize this competitive reality and reconsider its radio regulatory regime accordingly.

As an initial matter, the broadcast radio industry consists of tens of thousands of stations owned by thousands of separate owners. At the end of March, there were 26,358 radio stations of various types, 15,390 of which were full power.¹⁰² As of mid-May, there were 4,528 separate owners of these full power commercial and noncommercial educational (NCE) stations, and 7,000 separate owners of all radio outlets (including full power, translators, and LPFM stations).¹⁰³ Even full power commercial radio station ownership is dispersed among 3,001 separate owners.¹⁰⁴ These numbers show that terrestrial radio broadcasters are much less concentrated than satellite radio operators, with a single provider; the highly concentrated digital ad market, dominated by technology giants that also own leading streaming audio services; or even the recorded music industry,

¹⁰² FCC, *Broadcast Station Totals As Of March 31, 2022*, Public Notice, DA 22-365 (Apr. 5, 2022) (Broadcast Station Totals Notice).

¹⁰³ BIA Media Access Pro, as of May 19, 2022.

¹⁰⁴ *Id.*; see Broadcast Station Totals Notice at 1 (reporting 11,271 full power commercial AM/FM stations as of last March 31).

dominated by just three major labels, which alone earned billions more in revenue last year than the entire U.S. radio industry.¹⁰⁵

Given the sheer number of stations and owners, AM/FM broadcasters face significant competition for advertising revenues and audiences just from other terrestrial radio broadcasters. Competition for audiences is particularly robust, as 4,119 full power NCE FM stations (along with 2,049 LPFM stations) compete with commercial broadcasters for consumers' time and attention.¹⁰⁶

But as radio broadcasters earlier informed the Commission, “most of radio’s toughest competition” comes from internet companies owned by vastly larger entities, including America’s biggest tech platforms.¹⁰⁷ The five leading online brands are Spotify, YouTube Music, Pandora, Apple Music, and Amazon Music.¹⁰⁸ To say that radio broadcasters face challenges in successfully competing in a marketplace dominated by competitors of such vast scale and financial resources seriously understates the problem.

Among the top-five audio brands, Pandora is owned by SiriusXM, the country’s sole satellite radio operator, which provides hundreds of channels of satellite-delivered audio programming in every local market in the U.S. – a number of channels exponentially greater

¹⁰⁵ According to BIA, the over 11,000 commercial radio stations in the country together earned \$12.5 billion in total (OTA+digital) ad revenues in 2021. See BIA Advisory Services, *Investing In Radio*®, at 4 (1st ed. 2022). In contrast, the three record labels that dominate the recorded music industry in the U.S. and internationally generated over \$23 billion in revenue last year. *Every 2 Hours, The Major Music Companies Now Jointly Generate More Than \$5 Million*, Music Business Worldwide (Mar. 14, 2022).

¹⁰⁶ Broadcast Station Totals Notice at 1. Competition from NCE stations also indirectly affects commercial stations’ ad revenues, as diversion of audiences to NCE outlets negatively impacts commercial stations’ ad rates.

¹⁰⁷ Joint Comments of 10 Radio Broadcasters at 20, Heading E (capitalizations omitted).

¹⁰⁸ See Infinite Dial 2022 at 39-41 (reporting online audio brands listened to by Americans ages 12+ in the last month and in the last week and the audio brands used most often).

than any terrestrial radio broadcaster can air in any local market. Last year, SiriusXM combined the ad sales organizations of its three audio companies (Pandora, Stitcher, and SiriusXM) into SXM Media, creating a unified sales team crossing streaming, satellite radio, and podcasting.¹⁰⁹ As of the first quarter of this year, SXM Media was the top-ranked podcast network by reach, with Spotify ranking second.¹¹⁰

Even more formidably, the owners of YouTube Music (Alphabet/Google) and Amazon Music are two of the three tech platforms (along with Facebook) dominating digital advertising.¹¹¹ The financial resources of a company such as Amazon, with its vast revenues from digital advertising and e-commerce, can offer audio and video streaming services essentially as loss leaders, providing them at no additional cost as part of a consumer's Prime membership.¹¹²

Beyond owning and controlling audio services and platforms that compete with local radio stations for audiences and advertising revenues, these same giant companies – unlike radio broadcasters – also own and control the technologies consumers use to access and listen to online audio. For example, as of early 2022, about 252 million Americans owned

¹⁰⁹ Inside Radio, *SiriusXM, Pandora, and Stitcher Join Advertising Forces Under SMX Media Banner* (May 10, 2021). SXM also partially owns SoundCloud, another well-known streaming service. See *Infinite Dial 2022* at 39-40 (ranking SoundCloud seventh among online audio brands listened to monthly and weekly).

¹¹⁰ B. Hill, *SXM Media heads Top Podcast Networks list from Edison*, RAIN News (May 17, 2022).

¹¹¹ See Section V.C., *infra* (noting, *inter alia*, that in 2020, the U.S. digital ad revenues of Google alone far exceeded the combined OTA and digital ad revenues of *all* radio and TV stations in the country).

¹¹² In addition to the “free” Amazon Music streaming service, consumers can upgrade to the subscription Amazon Music Unlimited service, which is cheaper for Prime members than the other leading subscription music services. T. Pendlebury, *Best Music Streaming Service for 2022*, cnet.com (May 29, 2022).

smartphones,¹¹³ and Apple is the leading brand of smartphone in the country by a large margin. Apple accordingly possesses the ability to push its own audio and video content (Apple Music and Apple TV+) to the millions of its phones and other devices in consumers' hands, including tablets and laptop computers, to the disadvantage of broadcasters and other content providers. About 100 million Americans own smart speakers, with Amazon's Alexa being the leading brand.¹¹⁴ Unsurprisingly, those who own smart speakers listen to Amazon Music at higher rates than other consumers.¹¹⁵ For its part, Google's Nest is the second-most popular smart speaker brand. Millions of Americans have Pixel and other mobile phones with Google's Android operating system, while at the same time Google controls leading audio and video streaming services, including YouTube Music, YouTube TV, one of the fastest growing virtual MVPDs, and YouTube, which remains the world's biggest ad-supported streaming video operator.¹¹⁶

Significantly for AM/FM broadcasters, the tech giants have expanded their reach into automobiles through integrated mobile operating systems. Reports last year stated that over 80 percent of new cars in the U.S. were supporting Apple's CarPlay system.¹¹⁷ As of early

¹¹³ Infinite Dial 2022 at 6. As noted in Section IV.A., smartphones top the list of devices consumers use for listening to music.

¹¹⁴ Infinite Dial 2022 at 9-10.

¹¹⁵ *Id.* at 41. Those owning smart speakers also listen to Apple Music at higher rates than other consumers; perhaps not coincidentally, Apple has its own brand of smart speaker, the Home Pod. *Id.* Apple Music is the default subscription service to summon music by voice with the Home Pod. Pendlebury, *Best Music Streaming Service for 2022*.

¹¹⁶ D. Frankel, *YouTube TV: Everything You Need to Know About One of the Fastest Growing Virtual Pay TV Services*, nexttv.com (Dec. 10, 2021) (noting that YouTube generated a record \$17.2 billion in ad revenues in just the *third quarter* of 2021 and that YouTube TV has passed Hulu Plus Live TV and Sling TV as the biggest virtual MVPD service).

¹¹⁷ K. Leswing, *Apple's massive success with CarPlay paves the way for automotive ambitions*, CNBC (May 29, 2021).

this year, among those ages 18+ who had ridden/driven in a car in the last month, 17 percent had Apple CarPlay and 11 percent had Android Auto in their primary vehicles.¹¹⁸

Again, these developments will disadvantage competing sources of audio content, including terrestrial broadcasters.

Apple’s ability “to insert itself in between customers and car companies” to ensure the place of its interface in automobiles¹¹⁹ is one that much smaller broadcasters in a more fragmented radio industry cannot emulate. The size, scope, and financial position of Apple (and Google), along with the near ubiquity of their technology, enable them to negotiate one-on-one with global car companies. But how are the thousands of separate owners of radio stations – even the largest of which has but a fraction of the negotiating power of the tech giants – supposed to ensure their place in the dashboard of the future? The Commission cannot simply assume that in the digital age auto makers will continue to include AM/FM radio in cars’ “infotainment” systems or, even if included, will ensure that terrestrial radio remains easily accessible in a dashboard configured to feature Apples/Google’s integrated mobile operating systems, satellite radio, and/or Amazon’s voice assistant technology.¹²⁰ The tech and audio giants have no incentive to design any systems to feature competing content sources, such as AM/FM radio.¹²¹

¹¹⁸ Infinite Dial 2022 at 47.

¹¹⁹ Leswing, *Apple’s massive success with CarPlay paves the way for automotive ambitions*.

¹²⁰ A. Palmer, *Amazon to let automakers use Alexa software to create their own in-car voice assistants*, cnbc.com (Jan. 15, 2021) (explaining that Amazon, Google, and Apple want to get carmakers to integrate their technologies into in-car infotainment systems). See also C. Gunther, *The 7 Best Hands-Free Voice Assistants for Your Car*, reviewgeek.com (Mar. 9, 2021) (naming Amazon Echo Auto as the top choice among voice assistants for cars).

¹²¹ Spotify offers a simple aftermarket device called Car Thing for playing music and podcasts, which makes streaming audio less cumbersome and more seamless in any automobile. As technology writers have noted, this device also can “lock users into Spotify’s

In its competition report and other proceedings, the Commission needs to recognize these larger competitive and technological forces that may threaten the viability of OTA, ad-supported AM/FM stations licensed to local communities. The FCC also should reexamine its current regulatory regime and eliminate or revise rules uniquely burdening terrestrial radio stations but not broadcasters' exponentially larger competitors. This effort should include revision of the outdated local radio ownership limits, which pre-date satellite radio and audio streaming alike. As NAB previously explained in detail, these asymmetric ownership caps: (1) discourage investment in radio (both for existing broadcasters and potential new entrants);¹²² (2) impede many stations, especially in revenue-scarce smaller markets, from competing successfully and serving their local communities more effectively;¹²³ (3) prevent broadcasters from achieving increased (and vital) economies of scale and thus improved

ecosystem through hardware," because consumers cannot use the device without a Spotify subscription, and the device's ability to control other audio sources is "extremely limited." J. Newman, *I want Spotify's Car Thing, but without the Spotify*, fastcompany.com (Apr. 12, 2022). Again, radio (and TV) broadcasters do not have the luxury – or competitive advantage – of controlling the technologies used to access their content and certainly lack the ability to "lock in" audiences through hardware. See also Section V.B. (showing that Spotify had a market cap of \$22.16 billion on June 7, compared to the \$0.23 billion and \$1.67 billion market caps of Audacy and iHeart, respectively).

¹²² See, e.g., NAB Supplemental Comments at 15-19; NAB Feb. 2022 *Ex Parte* at 51-56. In these filings, NAB discussed economic studies showing that asymmetric regulation discourages investment and deters new entry in the regulated industry, and explained in detail how ownership and other restrictions make it more difficult for existing and especially prospective broadcasters to obtain capital.

¹²³ See, e.g., NAB Supplemental Comments at 31-34, 78-79, 82-83, and Attachment C; NAB Feb. 2022 *Ex Parte* at 30-32, 44-50 (explaining the greater economic challenges of radio stations in mid-sized and small markets, including in providing resource-intensive local programming such as news; describing the difficulties many radio stations face in even covering their fixed costs, let alone investing in improved programming, staff, and technical plant; and pointing out the numerous small station groups and smaller-market broadcasters that accordingly support relaxation or elimination of the local radio caps).

cash flows;¹²⁴ and (4) forestall the opportunity for stations to increase their listenership and earn greater ad revenues by programming multiple local stations differently to attract larger audiences and by upgrading their digital advertising products and sales staff.¹²⁵

And for those parties still reflexively opposing any ownership rule reform or other attempts to reduce asymmetric regulation of radio (and TV) stations, despite the digital transformation of the media and ad markets, NAB can only ask: How are commercial radio (or TV) broadcasters facing unprecedented (and still growing) competition for audiences and declining ad revenues supposed to pay for enhanced programming (including local news, weather and sports), engaged local staff, new digital advertising products and employees trained in selling them, costly infrastructure, and improved technical facilities? The answer that makes economic and common sense is to permit local radio (and TV) broadcasters to achieve increased scale economies, improved cash flow, and the opportunity to attract more sizable audiences and ad revenues. In short, if the FCC and other parties want public

¹²⁴ See, e.g., NAB Supplemental Comments at 79-81; NAB Feb. 2022 *Ex Parte* at 32-36, 45 (discussing studies demonstrating the value of scale economies in broadcasting and estimating the increases in cash flow that would result from radio station combinations prohibited by existing rules, as well as citing various small radio broadcasters that have specifically attested to their needs for greater scale in their local markets).

¹²⁵ See, e.g., NAB Supplemental Comments at 81-84; NAB Feb. 2022 *Ex Parte* at 36-44. NAB and numerous radio broadcasters previously explained that owning more stations locally enables broadcasters to program each outlet differently to attract different and additional audiences with differing tastes and interests. *Id.* Attracting larger audiences translates into higher ad rates and revenues for radio stations, see, e.g., 2018 Competition Report, 33 FCC Rcd at 12633, and helps stations compete for the mix of traditional and digital advertising spending by businesses in local markets. NAB and various broadcasters have further explained that, with greater cash flow and ad revenues resulting from scale efficiencies and ownership of more outlets, stations would be able to expand and improve their digital ad products and provide needed training to sales staff, thereby increasing the amount of digital ad dollars they garner in their local markets. See NAB 2022 *Ex Parte* at 37-40. BIA's earlier Radio Study also indicated that stations in larger groups appeared better able to turn potential audiences into ad revenue than stations in smaller groups, even after accounting for the impact of the larger populations generally reached by bigger station groups. *Id.* at 41-43; BIA Radio Study at 27, 31, and Appendix A.

service, then the FCC's policies must support the broadcast industry's "economic viability" in today's – not yesteryear's – media and advertising markets.¹²⁶

Indeed, the Commission needs to consider, in this and other proceedings, how the math will continue to add up to enable a highly regulated industry with high operational costs to provide audio and video services at no cost to the public. At some point, some broadcasters may come to believe that the best competitive strategy may be a simple shift to offering audio and video content via unregulated platforms.¹²⁷

¹²⁶ *Revision of Radio Rules and Policies*, Report and Order, 7 FCC Rcd 2755, 2760 (1992) (loosening the radio ownership limits in light of competition from other outlets, including cable and broadcast TV, and the declining financial position of many radio stations, especially in smaller markets); *2014 Quadrennial Regulatory Review*, Order on Reconsideration and Notice of Proposed Rulemaking, 32 FCC Rcd 9802, 9834 (2017) (2017 Reconsideration Order) (loosening the local TV rule and stressing that broadcasters' "important role" made it critical for the FCC to "ensure that its rules do not unnecessarily restrict their ability to serve their local markets").

¹²⁷ Radio and TV broadcasters must bear costs and burdens that do not apply to other audio and video market participants, especially online ones. For example, every terrestrial broadcaster must acquire an FCC license by paying market price for it either in an auction or via an FCC-approved assignment or transfer transaction from an existing licensee (which may cost millions); build, acquire and/or lease, and then maintain, extensive infrastructure such as transmitters, towers, antennas, and real property to house them; bear the substantial costs (e.g., electricity) of transmitting an OTA signal to its community of license; comply with FCC regulations ranging from keeping online public and political files and station logs to providing EAS alerts to preparing quarterly issues/programs to airing required programming (e.g., children's educational/informational TV programs); pay mandatory regulatory fees totaling in the tens of millions; and fulfill its statutory obligation to serve its community of license to qualify for renewal of its license every eight years. And above all, FCC-licensed broadcasters must provide signals free to the public and thus are more limited than many of their competitors in their options for recouping costs.

V. THE CONTINUING TRANSFORMATION OF THE VIDEO AND ADVERTISING MARKETS PRESENTS SIGNIFICANT ADDITIONAL COMPETITIVE CHALLENGES TO LOCAL TV STATIONS

A. Consumers Now Enjoy a Seemingly Infinite Amount and Variety of Video Content Options, Accessible Via a Growing Range of Devices and Platforms, Against Which Broadcasters Must Compete for Audiences' Time and Attention

As NAB has documented in multiple proceedings, broadcast television stations face intense and increasing competition from an expanding array of content providers accessible via myriad digital devices and platforms, including those owned by “Big Tech.”¹²⁸ The COVID-19 pandemic accelerated these trends and permanently changed how Americans consume video content.¹²⁹ Recent data confirm that more and more consumers have embraced digital video services and devices:

- As of spring 2022, 87 percent of U.S. TV households had at least one internet-connected TV (CTV) device (e.g., Smart TV, stand-alone streaming device like Roku, Amazon Fire TV stick, Chromecast, or Apple TV, and/or connected video game systems or Blu-ray players), up from 82 percent in 2021 and 30 percent in 2011, with a mean of 3.9 devices per TV household.¹³⁰ Daily viewership of video on CTV devices has grown substantially over the past decade, with younger persons using those devices most frequently.¹³¹ Last year eMarketer increased its estimate of the CTV user base in the U.S., expecting 213.7 million people to use the internet through a CTV device at least monthly in 2021.¹³² As of summer 2021, 54 percent of adults watched video on non-TV devices (including mobile

¹²⁸ See, e.g., NAB May 2022 *ex parte* at 2-7, 27-31; NAB Supplemental Comments at 19-28, 55-63, and 84-98; Section IV.C., *supra*.

¹²⁹ See Nielsen Insights, *Tops of 2020: Nielsen Streaming Unwrapped* (Jan. 12, 2021); NAB Supplemental Comments at 64-67, 87-99.

¹³⁰ Leichtman Research Group (LRG), Press Release, *46% of Adults Watch Video via a Connected TV Device Daily* (June 3, 2022) (LRG CTV Data 2022); LRG, Press Release, *39% of Adults Watch Video via a Connected TV Device Daily* (June 4, 2021) (LRG CTV Data 2021).

¹³¹ LRG CTV Data 2022. As of spring 2022, 46 percent of adults in U.S. TV households watched video via a CTV device daily, up from 39 percent in 2021 and three percent in 2011. Among those ages 18-34, 62 percent watched TV via a CTV device every day (up from 54 percent in 2021), as did 54 percent of those ages 35-54 (up from 43 percent in 2021). LRG CTV Data 2022; LRG CTV Data 2021.

¹³² N. Perrin, *CTV is still among the fastest-growing channels in digital advertising*, eMarketer (May 3, 2021).

phones, home computers, tablets, and eReaders) daily, with 81 percent of those ages 18-34 watching video on such devices every day.¹³³

- A 2021 report by Hub Entertainment Research found that 70 percent of U.S. TV homes had at least one smart TV, and smart TVs accounted for 52 percent of all TV sets in households. Smart TV adoption is even greater among younger households, with smart TVs accounting for 61 percent of all sets in households where the oldest person is under age 35.¹³⁴
- In spring 2022, 59 percent of TV households had at least one stand-alone streaming device, up from four percent in 2012.¹³⁵ NCTA – The Internet & Television Association previously provided information about the “substantial growth in the device marketplace,” observing that the major manufacturers of video devices, including Roku, Apple, Google, and Amazon, now have tens of millions of active users.¹³⁶ TV broadcasters have reported that platforms such as Roku and Amazon Fire TV commonly require content providers such as broadcasters to share a percentage (e.g., 30 percent) of their ad inventory with the platform – and the platform then retains all the ad revenue for that share.¹³⁷ Growing use of these platforms will increase the downward pressure on TV broadcasters’ ad revenues.

Consumers have been incentivized to adopt this growing array of digital devices by the explosion in the number and variety of video streaming services that compete with broadcast TV stations for audiences and advertising revenues:

- In 2020, Nielsen reported that U.S. consumers had more than 300 different video streaming services to choose from, both subscription and ad-supported.¹³⁸ Even

¹³³ LRG, Press Release, *U.S. Households with a Top SVOD Service Steady at 78%* (Aug. 31, 2021).

¹³⁴ K. Lukovitz, *Smart TVs Now In 70% Of U.S. TV Homes*, DigitalNewsDaily (Apr. 7, 2021).

¹³⁵ LRG CTV Data 2022.

¹³⁶ NCTA *Ex Parte* Letter, GN Docket No. 20-60, at 1 (Nov. 6, 2020) (pointing out that Roku’s active users grew from nine million in 2015 to 46 million in 2020 and that those users streamed a total of 40.3 billion hours of video content in 2019, an increase of 633 percent since 2015). Last year, more than half of smart-TV homes reported having a smart TV with a Roku or Fire TV operating system built in. Lukovitz, *Smart TVs Now In 70% Of U.S. Homes*.

¹³⁷ Attachment C, NAB Written Statement for the Record, *Online Platforms and Market Power, Part 1: The Free and Diverse Press*, U.S. House of Representatives, Committee on the Judiciary, Subcommittee on Antitrust, Commercial and Administrative Law, at 15 (Sept. 2, 2020) (NAB Congressional Statement on Online Platforms and the Press).

¹³⁸ Nielsen, *Beyond SVOD: Ad-Supported Streaming Is Starting To Stand Out As Video Options Multiply*, at 7 (2020) (Nielsen 2020 Streaming Report).

broadcast TV mainstays such as live sports, after migrating in part to cable, are now migrating to streaming platforms.¹³⁹ Between late 2019 and early 2021, streaming subscription options expanded to include Disney+, Peacock Premium, HBO Max, Paramount+ and Discovery+.¹⁴⁰ U.S. subscribership to the leading services, including Netflix and Amazon Prime, has grown exponentially over the past decade, while newer services, such as Disney+, have attracted tens of millions of subscribers in just a few years.¹⁴¹ Subscribership figures, moreover, underestimate streaming video's marketplace position. After accounting for "rampant password-sharing," group viewing, and large families, Netflix's total viewership is "nearly triple its paid subscriptions" worldwide,¹⁴² and in the U.S., 33 percent of Netflix services are used in more than one household.¹⁴³ A recent survey found that 72 percent of Americans "love [their] user experience with video streaming services," and 93 percent plan to increase or maintain their current streaming options.¹⁴⁴

- As of early this year, 83 percent of U.S. households had at least one streaming video service from 15 top subscription video on-demand (SVOD) and direct-to-consumer (DTC) services.¹⁴⁵ Consumers added streaming services during the pandemic,¹⁴⁶ and these trends are projected to continue. According to Digital TV Research, gross SVOD subscriptions in the U.S. will climb from 354 million at

¹³⁹ See, e.g., D. Byers, *Are you ready to stream some football? NFL has \$100 billion that says you are*, nbcnews.com (Mar. 28, 2021) (reporting that NFL finalized media deals for 2023-2033 it says will "help transition fans from traditional television to streaming platforms," including a deal making Amazon Prime the exclusive home for Thursday Night Football); Sports Business Journal, *NFL Plus streaming service is a go this season* (May 24, 2022) (reporting that NFL is expected to launch its own streaming service this July). Amazon Prime now also will livestream the Academy of Country Music Awards, the first major awards program to move to a streaming platform. J. Lafayette, *Academy of Country Music Awards to Livestream on Amazon Prime Video*, nexttv.com (Aug. 19, 2021).

¹⁴⁰ I. Olgeirson and T. Lenoir, *Multichannel takes back seat to online video households in 2021 US forecast*, Kagan (May 25, 2021).

¹⁴¹ See Attachment D, *Subscribers to OTT Video Services*.

¹⁴² eMarketer Daily, *Netflix is the elephant in the subscription OTT room* (Mar. 30, 2022).

¹⁴³ LRG, *Press Release, 33% With Netflix Share the Service* (Mar. 29, 2022).

¹⁴⁴ Nielsen, *Nielsen State of Play April 2022*, at 5, available at: <https://www.nielsen.com/us/en/insights/report/2022/state-of-play/>.

¹⁴⁵ LRG, *33% With Netflix Share the Service*.

¹⁴⁶ LRG, *U.S. Households with a Top SVOD Service* (reporting that the mean number of SVOD/DTC services among all U.S. households was 3.1 in 2021, up from 2.9 in 2020, and that 27 percent of households last year reported having five or more SVOD/DTC services). Other estimates of SVOD subscribership are higher. See Deloitte Oct. 2021 Report at 4 (finding that 84 percent of respondents pay for a SVOD service and that the average household has four subscriptions).

year-end 2021 to 458 million in 2027, with the average SVOD household paying for about 4.4 SVOD platforms by 2027.¹⁴⁷ Compounding the competition TV broadcasters face for audiences, 71 percent of TV households subscribed to some form of pay TV service (cable, satellite, telco, or internet-delivered virtual MVPD), as of fall 2021.¹⁴⁸

- Sixty-five percent of consumers recently surveyed by Deloitte said that they used free ad-supported video streaming services.¹⁴⁹ Ad-supported video on demand (AVOD) is anticipated to continue growing, especially with cost-conscious consumers.¹⁵⁰ AVOD services not only compete with broadcast TV for audiences but also for advertising directly. eMarketer predicts that Pluto TV, for example, will earn \$1.14 billion in net U.S. ad revenues in 2022.¹⁵¹ Netflix recently acknowledged that it will likely add a lower-cost, ad-supported tier in the next year or two, which will increase advertising competition in the video marketplace even more.¹⁵² For these reasons, AVOD has been deemed the “TV disruptor for 2022.”¹⁵³
- YouTube is the leading over-the-top (OTT) platform in the U.S. in terms of penetration among OTT video service users, with an estimated 95.5 percent market penetration. In 2021, YouTube reached an estimated 223.5 million U.S. viewers.¹⁵⁴ Many millions of Americans also watch video on social media sites, especially Facebook and, increasingly, TikTok.¹⁵⁵ The majority of Millennials and

¹⁴⁷ J. Easton, *US to add more than 100 million SVOD subscribers*, digitaltveurope.com (Feb. 17, 2022).

¹⁴⁸ LRG, Press Release, *71% of TV Households Have a Live Pay-TV Service* (Oct. 26, 2021). While traditional pay TV services have lost subscribers over the past several years, analysts have predicted continuing growth for virtual MVPDs such as YouTube TV. B. Munson, *U.S. vMVPD subscribers will total 23M by 2024: report*, Fierce Video (July 8, 2021) (citing Parks Associates’ projections).

¹⁴⁹ Deloitte Oct. 2021 Report at 4.

¹⁵⁰ See Nielsen 2020 Streaming Report at 2, 4; S. Shafer, *State of US online video: AVOD 2021*, Kagan (Nov. 30, 2021).

¹⁵¹ R. Benes, *Pluto TV will surpass \$1 billion in US ad revenues in 2022*, eMarketer (Apr. 6, 2021).

¹⁵² D. Hayes, *Netflix Will Add Advertising In “Next Year Or Two”; Co-CEO Reed Hastings Finally Concedes “Consumer Choice” Prompting Cheaper Plan*, deadline.com (Apr. 19, 2022).

¹⁵³ AdAge/Kantar, *Ad-Supported Video On Demand Is The TV Disrupter For 2022*, adage.com (Dec. 21, 2021).

¹⁵⁴ S. Lebow, *More than half of US YouTube viewers watch on a CTV device*, eMarketer (Oct. 6, 2021).

¹⁵⁵ S. Shafer, *More Americans are tuning into TikTok*, Kagan (Feb. 14, 2022).

Generation Z spend more time watching user-generated video content online than watching TV shows and movies on video streaming services.¹⁵⁶

- Due to the pandemic, usage of streaming video services and CTV devices grew exponentially in 2020. In January 2020, consumers in homes with at least one CTV device were using those devices for 12.5 billion hours per month. During the week of March 30, 2020, total hours spent with CTV devices had risen 81 percent year over year, equating to nearly four billion hours of CTV use per week.¹⁵⁷ In August 2020, Nielsen reported that streaming consumption across all video options had risen more than 74 percent from 2019.¹⁵⁸ And these increases in streaming only continued in 2021. Americans increased their weekly time streaming video by 18 percent year-to-year from February 2021 to February 2022,¹⁵⁹ and, in total, streamed almost *15 million years' worth* of content in 2021.¹⁶⁰
- Beyond video streaming services, video gaming activities exploded during the pandemic, up 75 percent by some measures.¹⁶¹ Twenty-nine percent of U.S. consumers have said they are more likely to use free time to play a video game than watch a video, with Generation Z consumers citing playing video games as their favorite entertainment activity.¹⁶² Last year eMarketer estimated a total 177.7 million monthly digital gamers in the U.S.,¹⁶³ and earlier this year, it projected that over 54 percent of the U.S. population will be digital gamers in 2022.¹⁶⁴

¹⁵⁶ Deloitte 16th Digital Media Trends at Figure 6.

¹⁵⁷ CTV usage remained well above pre-COVID levels during the summer of 2020, when traditional TV usage had normalized. Nielsen, *Connected TV Usage Remains Above Pre-COVID-19 Levels As Traditional TV Viewing Normalizes* (June 4, 2020).

¹⁵⁸ Nielsen, *Growth Spurt: Time Spent Streaming Ad-Supported Video Is Outpacing Big-Name SVOD Viewing* (Aug. 18, 2020) (noting that the growth and “stickiness” of streaming among adults 55+ indicates that streaming is “closer to ubiquity across consumer groups”).

¹⁵⁹ Nielsen’s *State of Play report reveals that streaming is the future, but consumers are currently overwhelmed by choice*, Press Release, nielsen.com (Apr. 6, 2022).

¹⁶⁰ Nielsen, *Streaming grew its audience in 2021; Drama, reality and kids’ programming led the content wars* (Jan. 21, 2022) (reporting that in the last week of December 2021, U.S. audiences streamed 183 billion minutes, eclipsing the amount of time spent streaming at the weekly height of COVID-19 lockdowns in early 2020).

¹⁶¹ Deloitte 14th Digital Media Trends at 12.

¹⁶² *Id.*; Deloitte 16th Digital Media Trends.

¹⁶³ B. Drosch, *The US Gaming Ecosystem 2021*, eMarketer (Mar. 17, 2021).

¹⁶⁴ N. Goetzen, *Digital gamers powered up during the pandemic*, eMarketer (June 13, 2022) (noting weekly average time spent gaming soared 16.5 percent between 2019 and 2020 and continued to grow in 2021).

Amid this “vastly fragmenting sea of choice,”¹⁶⁵ TV broadcasters face unprecedented challenges in attracting and retaining audiences. Nielsen’s monthly total TV and streaming snapshot called “The Gauge” reconfirms that broadcast TV is only one of three major platforms in the video universe, along with cable and the rapidly growing streaming sector.¹⁶⁶ According to The Gauge’s most recent report, audiences in May spent 31.9 percent of their total TV time watching OTT content.¹⁶⁷ Notably in that month, Netflix alone drew 6.8 percent of total TV viewing, with YouTube (including YouTube TV) garnering 6.7 percent,¹⁶⁸ again showing that TV station groups must compete for audiences with unregulated entities with much greater scale and financial resources. The expansion of streaming can only be expected to continue apace, given recent trends in consumer adoption of technology, as described above, and growing broadband subscribership.¹⁶⁹

¹⁶⁵ Nielsen, *Growth Spurt: Time Spent Streaming Ad-Supported Video Is Outpacing Big-Name SVOD Viewing*, at 1 (Aug. 18, 2020).

¹⁶⁶ See Nielsen, *The Gauge Shows Streaming Is Taking A Seat At The Table* (June 17, 2021). The Gauge shows Total Usage of Television (TUT) for Broadcast, Cable, Streaming and “Other,” which includes VOD, Gaming, DVD playback, etc. Earlier this year, for instance, The Gauge reported that, across all TV homes, 26 percent of all time spent on TV (total day, persons ages 2+) was with broadcast, while 35.4 and 28.7 percent of TV time were spent with cable and streaming, respectively, with ten percent spent on Other. Nielsen, *Nielsen’s The Gauge: Monthly Total TV and Streaming Snapshot for February Details Linear Uptick as News and Sports Consumption Grow*, Press Release (Mar. 17, 2022).

¹⁶⁷ Nielsen, *Nielsen’s The Gauge Finds Streaming Captures Nearly 32% of Total TV Viewing in May, a Third Consecutive Record-Breaking Month For the Digital Format*, Press Release (June 16, 2022) (also reporting that, across all TV homes, 24.4 percent of all time spent on TV (total day, persons ages 2+) was with broadcast, 36.5 percent with cable, and 7.2 percent with Other).

¹⁶⁸ *Id.*

¹⁶⁹ Increased rollout of 5G technology and continued growth in home broadband will further encourage adoption of streaming services. According to LRG, 87 percent of U.S. households, as of late 2021, had an internet service at home, and 85 percent of all households got a broadband internet service. LRG, Press Release, *87% of U.S. Households Get an Internet Service at Home* (Dec. 28, 2021). The largest cable and wireline phone providers in the U.S.

The growth of online video and other digital media options continues to undermine the basis for the FCC’s broadcast-only national and local TV rules and other asymmetric regulations. eMarketer has concluded that “digital video,” rather than a shift away from watching TV-style content generally, “is the leading culprit” for the declining numbers of adult viewers of traditional linear TV.¹⁷⁰ The weekly reach of all linear TV (broadcast/cable/satellite, live + time shifted) among the U.S. population 18+ fell to 81 percent in Q4 2020 (down from 88 percent in Q1 2018), lower than the weekly reach of apps/web on smartphones (85 percent).¹⁷¹

According to Nielsen, broadcast TV’s total share of prime time viewing (counting only cable, DBS and broadcast) among the audience most coveted by advertisers (those ages 18-49) fell from 46 percent in 2003 to 34 percent in 2013, and further declined to 27 percent in 2021.¹⁷² Stated differently, among the average 17,976,285 people ages 18-49 using TV¹⁷³ during any given minute of prime time in 2021, an estimated 4,860,919 were viewing broadcast stations – and these 4,860,919 people represent just 3.8 percent of the estimated total 129,440,000 people ages 18-49 in U.S. TV households. Similarly, the

acquired 2.95 million net additional broadband internet subscribers in 2021, the year after they added 4.86 million subscribers. LRG, Press Release, *About 2,950,000 Added Broadband from Top Providers in 2021* (Mar. 7, 2022). In total over the past three years, the top providers have added about 10.36 million additional broadband subscribers. *Id.*

¹⁷⁰ E. Cramer-Flood, *TV’s weird 2020: Viewership plummeted, but time spent increased*, eMarketer (Feb. 11, 2021). The number of adult viewers of linear TV declined 2.3 percent in 2018, 3.9 percent in 2019, and 4.7 percent in 2020, and eMarketer forecast another 2.4 percent drop in 2021. *Id.*

¹⁷¹ *The Nielsen Total Audience Report*, at 4 (June 2021) (reporting Q4 2020 data).

¹⁷² Nielsen, U.S. Live + Same Day 2003, 2013, 2021. Broadcast TV’s share of total day viewing among those ages 18-49 was only 27 percent in 2021, down from 40 percent in 2003. *Id.*

¹⁷³ Counting broadcast, cable and DBS, but not streaming or SVOD.

average 20,759,783 people ages two and older who viewed broadcast TV during any given minute of prime time in 2021 represent only 6.7 percent of the estimated total 307,970,000 people ages two and older in U.S. TV households. This audience fragmentation has eroded the ratings of even the most popular broadcast TV programs. The top-rated broadcast TV program during the 2020-2021 season received slightly over one quarter of the ratings received by the top-rated program in the 1985-1986 season.¹⁷⁴

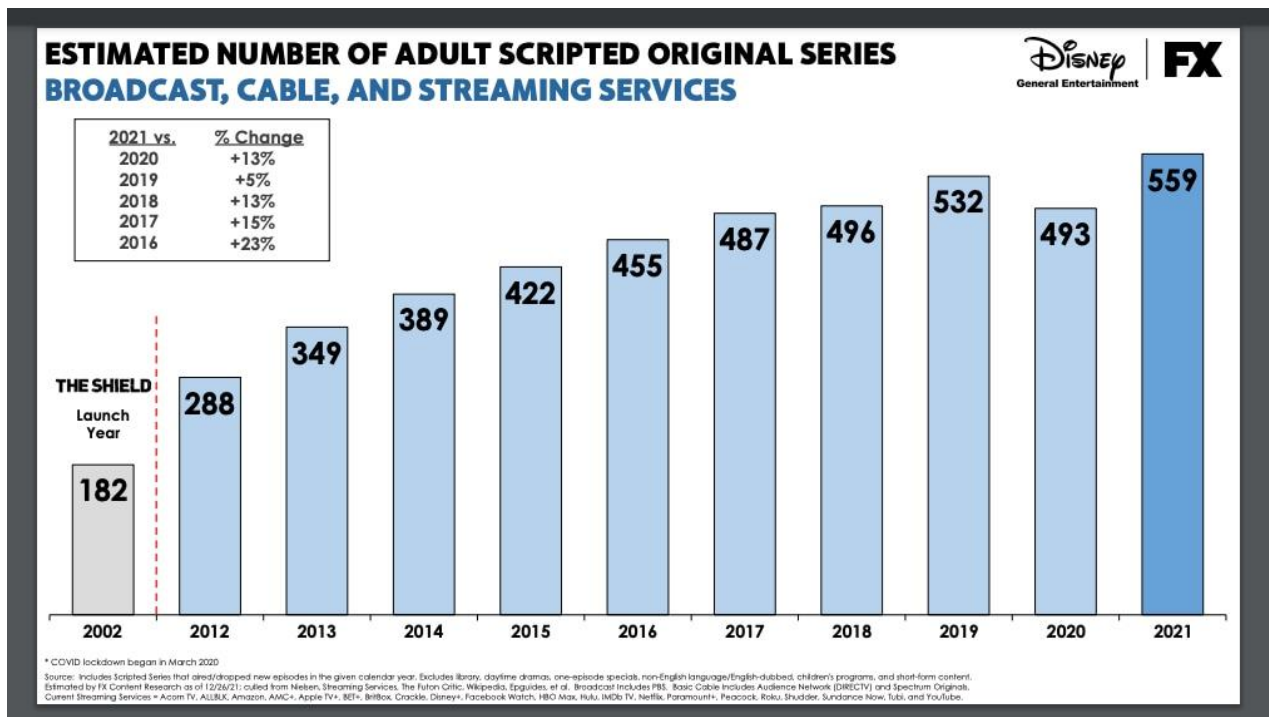
The Commission cannot continue to justify the existing broadcast regulatory regime in this era of “Peak TV.” Seven years ago, John Landgraf, President of FX Networks, received considerable publicity by remarking there was “too much television,”¹⁷⁵ but available video content has only further exploded since 2015. As of February 2022, for example, Nielsen’s Gracenote listed more than 817,000 unique program titles across U.S. traditional TV and streaming services (with many of those titles featuring hundreds of individual episodes and chapters), compared to just over 646,000 unique program titles in December 2019.¹⁷⁶ Last year set yet another record for the number of scripted original series in English available via broadcast, cable, and streaming services. As shown below, the number of such series grew from 182 to 559 over the past 20 years.¹⁷⁷

¹⁷⁴ Attachment E, Ratings of Top TV Programs.

¹⁷⁵ C. Littleton, *FX Networks Chief John Landgraf: ‘There Is Simply Too Much Television,’* variety.com (Aug. 7, 2015).

¹⁷⁶ Nielsen, *Nielsen State of Play April 2022*, available at: <https://www.nielsen.com/us/en/insights/report/2022/state-of-play/> at 2.

¹⁷⁷ This count does not include foreign language programs, daytime dramas, children’s programming, or unscripted series. R. Porter, *Peak TV Update: Scripted Series Volume Hits All-Time High in 2021*, The Hollywood Reporter (Jan. 14, 2022). Variety estimated that a record 1,923 original series of all types (including animation and unscripted series) aired across U.S. broadcast, cable, and streaming services in 2021. *Streaming Pushes Peak TV to New Heights*, VIP+ Variety Intelligence Platform (Dec. 28, 2021).



In addition to competition from non-broadcast platforms, broadcasters also are adding to the vast consumer choice available in the video marketplace. A recent analysis of digital multicast offerings found that the total number of live, OTA broadcast channels increased to 7,808 as of February 2022, up from 7,251 in 2021 and 6,109 in 2017 – an increase of 27.8 percent over the five-year period.¹⁷⁸ With NexGen TV available in more markets, many broadcasters have used the increased technological capabilities for multicasting in the hopes that delivering a greater variety of content will help them grow audiences and attract advertisers.¹⁷⁹ TV station groups offer numerous “diginets” targeting specific audiences, including women, African Americans, and Spanish language speakers.¹⁸⁰

¹⁷⁸ Peter Leitzinger, *Digital multicast TV database: New networks growing amid NextGen TV rollout*, Kagan (May 27, 2022).

¹⁷⁹ *Id.*

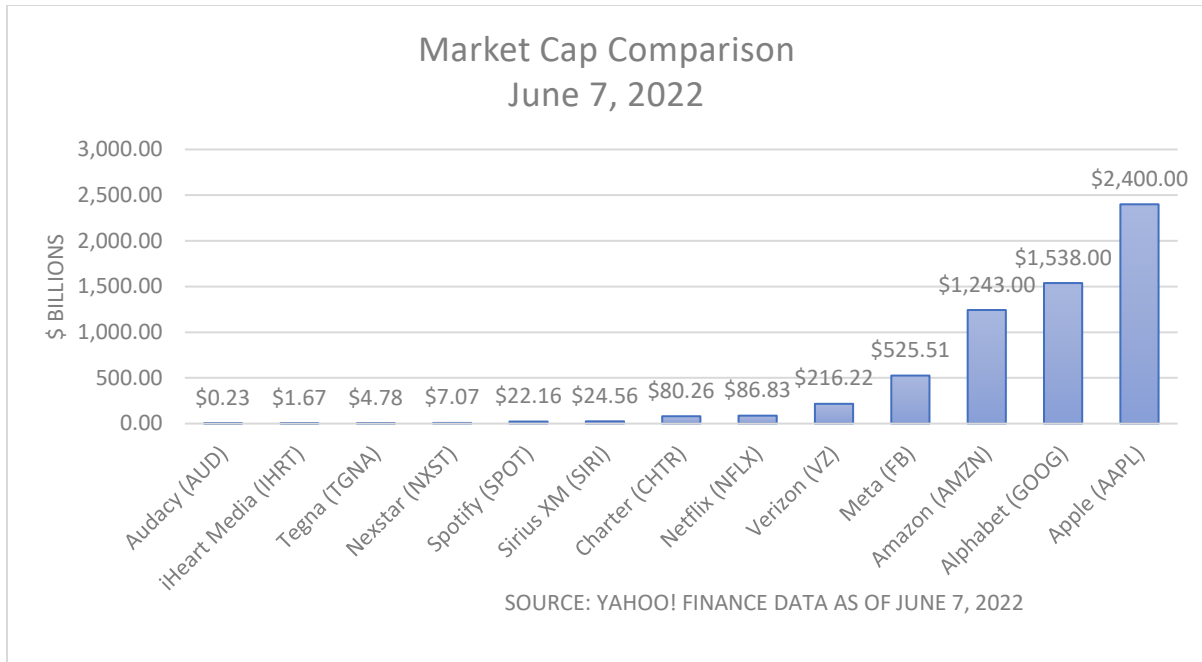
¹⁸⁰ See B. Adgate, *TV Stations Are Launching Multicast Networks As An Opportunity To Reach Cord Cutters*, forbes.com (June 10, 2021); G. Bridge, *The Rise of the Diginets*, VIP+ Variety Intelligence Platform (Apr. 4, 2022).

As TV broadcasters struggle to compete for audiences with larger, unregulated video content providers while offering free OTA programming to consumers, the FCC cannot show that retaining TV stations' asymmetric regulatory burdens, which discourage investment in the public's broadcast TV service, serves the public interest.¹⁸¹ Given that consumers cannot even keep up with all the available video content, no rational competition or diversity basis exists for maintaining the current broadcast TV ownership restrictions in particular. Failing to take the extraordinary changes in the video marketplace – and broadcasters' radically changed position in that market – into account in the upcoming 2022 competition report or in other broadcast-related proceedings would be wholly unjustifiable.

B. While Advertisers Enjoy Myriad Traditional and Digital Ad Options, TV Broadcasters Now Compete Against Exponentially Larger Advertising Platforms

The market capitalization comparison graphic below illustrates the absurdity of today's broadcast-only regulatory paradigm. The market caps of the technology giants, as well as the leading OTT and multichannel video/broadband providers, dwarf those of even the largest TV station groups, yet broadcasters must compete against these exponentially larger and unregulated entities for advertisers and audiences.

¹⁸¹ Asymmetric regulation, including ownership rules, undermines investment in broadcasting. See, e.g., NAB Supplemental Comments at 15-17 (citing studies showing that retaining asymmetric legacy regulations in an era of increased competition creates regulatory distortions, drives up the regulated industry's costs, causes scarce capital to flow to less regulated industries, deters new firm entry, and places the more heavily regulated companies at a competitive disadvantage).



Given the digital sector’s enormous scale and growing dominance of the advertising market, including specifically video advertising,¹⁸² the decline in TV stations’ ad revenues and in their share of the local ad market over time is hardly surprising.¹⁸³ Because digital platforms compete with local TV broadcasters for local advertising dollars,¹⁸⁴ these trends are not expected to reverse.

¹⁸² See A. Boyle, *GroupM: Digital Advertising Experiencing ‘Fastest Growth In The History Of Advertising,’* *adexchanger.com* (Dec. 6, 2021); S. Shafer, *Big gains ahead in US digital video ad forecast for 2021-2025*, *Kagan* (Dec. 13, 2021) (reporting that shifting TV landscape and changing consumer behavior have lifted the digital video ad sector to “heady new highs” with 30 percent annual increases in 2020 and 2021, and projecting strong growth for that sector through 2025).

¹⁸³ According to BIA, the local TV station industry’s total (OTA+digital) advertising revenues fell on a real (*i.e.*, inflation adjusted) basis by 37.3 percent from 2000-2020. NAB Supplemental Comments at 95-96 and Attachment J, *Nominal and Real Local TV Station Industry OTA Advertising Revenues and Nominal and Real Local TV Station Industry Revenue (OTA+Digital)*. Early last year, Kagan reported that spot TV’s share of the overall local advertising market was about 10 percent in 2020 and projected it to fall to 7.3 percent by 2030. 2021 Ad Market Report.

¹⁸⁴ See Section II., *supra*, discussing NERA Study, Attachment A.

Digital ad revenue in the U.S. jumped 35 percent in 2021, with digital video advertising specifically up 50.8 percent, while BIA data show that local TV ad spending fell from its 2020 level.¹⁸⁵ Industry analysts have noted the recent remarkable growth in CTV ad spending, which is now the “fastest growing video advertising platform.”¹⁸⁶ Growth rates for CTV advertising in 2021 were stratospheric, and analysts expect CTV advertising to continue its rapid growth, fueled in considerable part by advertisers and marketers shifting ad dollars away from linear TV and toward CTV.¹⁸⁷ Notably, CTV is poised to garner growing amounts of political advertising, at the expense of traditional TV.¹⁸⁸ The share of political ad spending on broadcast TV has already dropped from nearly 80 percent in 2014 to 59 percent in 2020, while digital’s share rose from little more than zero to 18 percent, about equal to cable TV’s

¹⁸⁵ IAB Ad Report Press Release; M. Graham, *Digital Ad Revenue Jumped 35% in the U.S. Last Year, Biggest Gain Since 2006*, Wall Street Journal (Apr. 12, 2022) (citing report from IAB and PwC); BIA Advisory Services, *Television Station Revenues 2016-2026 (2022)* (estimating drop in total (OTA+digital) TV station ad revenues from \$19.7 billion in 2020 to \$17.4 billion in 2021).

¹⁸⁶ B. Adgate, *The Fastest Growing Video Advertising Platform Is Now CTV*, forbes.com (Oct. 13, 2021). CTV advertising is digital advertising that appears on connected TV devices.

¹⁸⁷ See R. Benes, *Pluto TV will surpass \$1 billion in US ad revenues in 2022*, eMarketer (Apr. 6, 2021). Last fall, eMarketer estimated that CTV advertising growth for 2021 would approach 60 percent by year’s end and would grow an additional 32 percent in 2022. S. Lebow, *US connected TV advertising will approach 60% growth by year-end*, eMarketer (Nov. 10, 2021). Other estimates were noticeably lower, but still showed remarkable growth rates for CTV advertising. See Adgate, *The Fastest Growing Video Advertising Platform Is Now CTV*; see also P. Verna, *Digital ad spending blows past previous forecasts*, eMarketer (Jan. 13, 2022) (projecting that CTV ad spending will more than double from 2021-2025).

¹⁸⁸ Sara Fischer, *The future of political advertising is connected TV*, Axios (Apr. 15, 2021) (reporting that increased CTV political spending seems to be a reallocation primarily from traditional TV, rather than other digital channels, and explaining that CTV can offer political advertisers a similar type of messaging platform as traditional TV but with more precise targeting and hardly any regulation). See also J. McCormick, *Midterm-Election Ad Spending Poised to Soar as Streaming TV Attracts Campaigns*, Wall Street Journal (July 19, 2021) (expecting ads in 2022 elections to increasingly appear via CTV devices).

political ad share.¹⁸⁹ AdImpact forecasts that CTV political ad dollars alone will surpass political advertising on cable TV for the 2022 mid-term elections.¹⁹⁰ Obviously, marketplace developments that shift political ad dollars toward digital platforms will impact the financial position of broadcast TV stations.

The continuing growth of digital advertising at the expense of traditional media, including linear TV, hits smaller market TV stations particularly hard. TV stations in mid-sized and small markets earn much lower levels of advertising revenue than their large market counterparts. In 2021, for example, the average TV station in the smallest markets (DMAs 151-210) earned only 8.3 percent of the amount of ad revenues earned by the average station in the top-10 DMAs. Similarly, the average TV station in DMAs 101-150 and 51-100 earned just 12.9 percent and 19.4 percent, respectively, of the ad revenue garnered by the average top-10 DMA station. Even stations in DMAs 26-50, the average TV station earned just over one-third (35.8 percent) of the ad revenues gained by the average station in the 10 largest DMAs.¹⁹¹

Given this evidence, the Commission must reconfirm its 2020 Competition Report that broadcast TV is only one participant in a broader video marketplace and has multiple and growing competitors for both audiences and advertisers. Like the local radio industry,

¹⁸⁹ Fischer, *The future of political advertising is connected TV*.

¹⁹⁰ Adgate, *The Fastest Growing Video Advertising Platform Is Now CTV*.

¹⁹¹ See Attachment F, *The Relationship Between Market Size and Advertising Revenue*. TV stations in mid-sized and small markets not only struggle to earn adequate levels of advertising revenue due to the much more limited pool of available ad revenues in less populated markets, but also because advertisers value the TV households in those smaller markets less on a per-household basis. See *id.* (showing that TV stations' average ad revenues per TV household is notably lower in mid-sized and small markets than in large markets). See *also* NAB Supplemental Comments at 33-34 and Attachment D (showing comparable ad revenue distribution between small and large market TV stations in 2019 and 2020).

the broadcast TV industry moreover competes on an unequal playing field against much larger advertising and video content platforms and providers, including the Big Tech platforms. A recent report on platform competition in the video market illustrates this point in a table that identifies the major companies competing for revenue by platform. Tellingly, Alphabet (Google/YouTube), Amazon, and Apple appear prominently. Alphabet, for example, has its own AVOD/FAST service (YouTube) and can generate additional revenue through its various platforms, including a virtual MVPD (YouTube TV), smartphone (Pixel), smart TV (Google TV (OS)), and connected TV device (Chromecast), all with advertising and “upsell” opportunities.¹⁹² This vast expansion of the video marketplace to include the giant tech platforms makes the FCC’s long-standing broadcast TV regulatory policies and traditional narrow market definitions seem not only antiquated but also threatening to TV broadcasters’ competitive viability.

As discussed in Section IV.C. above, the Commission therefore must consider here and in other proceedings how to reform its asymmetric broadcast TV (and radio) regulatory regime to help ensure that broadcasters with high operational costs can continue to provide video and audio services, including valued local news, at no cost to the public. Otherwise,

¹⁹² Gavin Bridge, *Connected TV Competition: Get Subscription Video Right*, VIP+ Variety Intelligence Platform Special Report, at 2, 5-6 (1st ed. Feb. 2022). “Formats with an upsell are where a [video] subscription can be made via the platform, with the platform taking a cut.” *Id.* at 5-6 (explaining that the “new world sees hardware and software competing to be the consumer conduit to subscribing in order to be the service that levies an SVOD toll”). And as discussed above, connected TV advertising is digital advertising that appears on connected TV devices, such as Alphabet’s Chromecast, Amazon’s Fire TV, Apple TV, or Roku. Companies like Roku and Amazon have developed interfaces making it easy for viewers to subscribe to video services via their platforms, taking a cut of the subscription, and also building out competitive free streaming services (e.g., Roku Channel, Amazon Freevee (formerly IMDb TV), and Twitch) to monetize users via serving ads. *Id.* at 2.

the local TV industry will reach a point, especially for stations in revenue-scarce smaller markets, where the traditional broadcast TV model no longer functions.

C. The Technology Platforms' Dominance of the Advertising Market and Online Content Discovery Have Placed TV Stations and Their News Operations Under Increasing Duress

“[T]he local news industry is being decimated in the digital age.”¹⁹³ Recognizing this threat, multiple bills have been introduced in Congress to support the local journalism provided by newspapers and broadcasters.¹⁹⁴ The FCC should follow Congress’s lead in recognizing the importance of viable, trusted news operations and addressing the increasing threat to locally-oriented journalism in communities across the country.

In examining the economic challenges besetting the local news industry, Congress has identified the dominant and “monopolistic” power of digital platforms such as Google and Facebook, and their unfair and “anticompetitive” treatment of media outlets in local

¹⁹³ Senator Maria Cantwell, Ranking Member, U.S. Senate Committee on Commerce, Science, and Transportation, *Local Journalism: America’s Most Trusted News Sources Threatened*, Report, at 1 (Oct. 2020). See also U.S. Senate Commerce Committee Ranking Member Maria Cantwell, *Senate Commerce Committee Minority Report Calls Unfair Practices by Tech Companies a Threat to Local News*, Press Release (Oct. 27, 2020) (stating that local news across the country creates trusted information and that “[w]e shouldn’t let regional and community news die as local newspapers and broadcasters adjust to digital delivery because online giants are unfairly leveraging the advertising market against them”).

¹⁹⁴ These bills include the Journalism Competition and Preservation Act, which would grant broadcast, print, and digital news organizations temporary immunity from antitrust laws to allow them to collectively negotiate the terms on which their content may be carried by technology companies such as Google and Facebook; the Local Journalism Sustainability Act, which would provide tax incentives to support local journalism, including an incentive for small businesses to advertise on local newspapers and broadcast stations; and the Future of Local News Act, which would create a commission of industry experts to study the issues facing the journalism industry and submit a report to Congress with findings and recommended solutions to support the industry. Angela Fu, *The pandemic devastated newsrooms. Now they’re seeking help from Congress*, Poynter (June 8, 2021).

markets, as a primary cause of the decline of local journalism.¹⁹⁵ As the bipartisan sponsors of the Journalism Competition and Preservation Act explained, “[n]early 90 percent of Americans” now obtain news via smartphones, computers, or tablets, “dwarfing the number” who get news via television, radio, or print media.¹⁹⁶ Facebook and Google, moreover, account for the “vast majority of online referrals to news sources,” with those two companies also controlling “a majority of the online advertising market.”¹⁹⁷ Last year Google, Facebook, and Amazon combined earned 64 percent of total U.S. digital advertising revenues, and, as of May 2022, Google alone had an 87.7 percent share of the U.S. search engine market.¹⁹⁸

NAB agrees that the giant tech platforms’ rise to dominate both content discovery and digital advertising has already decimated the newspaper industry and is imperiling the ability of broadcast stations to reach online audiences with their content, including local news, and to derive ad revenue from that content. As NAB previously explained to the House

¹⁹⁵ News Release, *Senator Klobuchar and Representative Cicilline Introduce Legislation to Protect Journalism in the United States* (Mar. 10, 2021) (Klobuchar/Cicilline News Release) (along with co-sponsors Senator Kennedy and Representative Buck, announcing introduction of bill to allow news publishers to collectively negotiate with digital platforms).

¹⁹⁶ *Id.*, citing a survey by the Pew Research Center. This Pew survey found that 86 percent of U.S. adults get news from digital devices, 60 percent of them often. In comparison, 68 percent report getting news from television (all types, not just broadcast), with only 40 percent reporting that they often do so. Fifty percent say they get news via radio, but only 16 percent often do so, and print publications trail well behind. Among consumers under age 50, only 16 percent of those ages 18-29, and just 25 percent of those ages 30-49, often get news from TV. Elisa Shearer, *More than eight-in-ten Americans get news from digital devices*, Pew Research Center (Jan. 12, 2021). See also E. Shearer and A. Mitchell, *News Use Across Social Media Platforms in 2020*, Pew Research Center (Jan. 12, 2021) (reporting that 53 percent of adults get news on social media “often” or “sometimes” and that 36 percent of adults “regularly” get news on Facebook).

¹⁹⁷ Klobuchar/Cicilline News Release.

¹⁹⁸ See S. Lebow, *Google, Facebook, and Amazon to account for 64% of US digital ad spending this year*, eMarketer (Nov. 3, 2021); statcounter Global Stats, <https://gs.statcounter.com/search-engine-market-share/all/united-states-of-america>.

Antitrust Subcommittee, and as discussed above, TV and radio station ad revenues have significantly fallen over the past two decades, as the advertising market has become dominated by a few giant digital platforms.¹⁹⁹ In 2020, the U.S. digital advertising revenues of two companies – Google and Facebook – each *separately* far exceeded the *combined* OTA and digital ad revenues of *all* TV and radio stations in the country.²⁰⁰

Beyond diverting advertisers – and crucial revenue – away from local broadcast stations throughout the country, the digital platforms also control the technologies that power both content discovery (search) and digital advertising.²⁰¹ Whether consumers use search engines, social networks, voice or video platforms, or even broadcasters’ own apps to access news and other content, decisions made unilaterally by a few dominant digital technology giants impede local broadcasters’ ability to connect with their audiences online. The ranking algorithms used by platforms determine what sources, articles and clips appear, or are “surfaced,” to users. While the platforms constantly tweak and adjust them, those algorithms have consistently favored national sources over local sources; frequently favored

¹⁹⁹ Attachment C, NAB Congressional Statement on Online Platforms and the Press at 5-9.

²⁰⁰ BIA estimated that radio and TV stations’ combined OTA and digital ad revenues were \$30.3 billion in 2020. BIA Advisory Services, Press Release, *Radio Revenues Fell to \$9.7B in 2020, As Pandemic Toll on the Industry Affected Local Radio Stations* (May 14, 2021); George Winslow, *BIA: Local TV Revenues Hit \$19.7 Billion in 2020*, tvtechnology.com (June 10, 2021). Google’s U.S. digital ad revenues in 2020 were about \$44 billion, while Facebook’s ad revenues were over \$38 billion. See eMarketer, *Amazon’s share of the U.S. digital ad market surpassed 10% in 2020* (Apr. 6, 2021); N. Perrin, *U.S. Digital Ad Spending 2021*, eMarketer (Apr. 14, 2021). And Amazon’s U.S. digital ad revenues (\$15.7 billion) exceeded the OTA and digital ad revenues of all U.S. radio stations (\$10.6 billion). *Id.*

²⁰¹ The House Subcommittee on Antitrust agrees. Its October 2020 report stated that, by “dominating both digital advertising and key communication platforms, Google and Facebook have outsized power over the distribution and monetization of trustworthy sources of news online, creating an uneven playing field in which news publishers are beholden to their decisions.” *Investigation of Competition in Digital Markets*, Majority Staff Report and Recommendations, Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary, at 388 (2020).

controversial and polarizing content and opinion sources over quality journalism; and often make it difficult for smaller, local publishers to reach audiences at all.²⁰² In 2020, for example, after many local stations added a COVID-19 category to their news apps, Google unilaterally flagged and removed some of those apps from its store, thereby undercutting stations' commitment to providing up-to-date local and state coverage of the pandemic.²⁰³

The platforms' technological control and lack of transparency also permit them to impose advertising limits and policies that impede stations' ability to effectively monetize their own content online. For instance, the platforms unilaterally determine which content is eligible to be monetized and decide the share of revenue they retain versus the amounts passed on to the content providers that bear all the costs of producing the quality content that financially benefits the platforms. Broadcasters are generally unable to sell their own ad inventory for their content on third-party platforms because the platforms control the sale of that inventory, often to broadcasters' detriment.²⁰⁴

In short, broadcasters lack bargaining power when dealing with the digital giants that have become gatekeepers for content providers, including TV stations, seeking to reach audiences and monetize their content online. The leading platforms' market power thus increasingly impairs broadcasters' ability to earn the ad revenues needed to help recoup the considerable costs of producing locally-oriented news and information in the first place.

²⁰² Attachment C, NAB Congressional Statement on Online Platforms and the Press at 10-14.

²⁰³ *Id.* at 13.

²⁰⁴ *Id.* at 14-16.

A 2021 study commissioned by NAB quantified the economic losses to broadcasters from certain practices of the big tech platforms.²⁰⁵ Specifically, this study conducted extensive interviews of broadcast group executives and examined Google Search and Facebook News Feed in detail to model the value that local broadcasters' news content creates for the tech platforms but that broadcasters are unable to monetize due to the platforms' practices. Just from the examples of Google Search and Facebook News Feed, the study estimated close to \$2 billion in annual loss of value to broadcasters.²⁰⁶ Its research led the authors to conclude that no platform currently offers a viable economic model for broadcast news, *i.e.*, one that would pay or enable broadcasters to earn equitable revenue on their news content.²⁰⁷

Other recent studies confirmed that, due to the ways in which digital platforms like Google direct attention to some news outlets and not others, the tech platforms may be “directing web traffic and desperately needed advertising dollars away from local news.”²⁰⁸

²⁰⁵ Attachment G, BIA Advisory Services, *Economic Impact of Big Tech Platforms on the Viability of Local Broadcast News* (May 2021) (BIA Big Tech Study).

²⁰⁶ BIA estimated: (1) Facebook News Feed lost value at \$455 million annually, with a range between \$325 to \$585 million; (2) Google Search/zero click lost value at \$1,289 million, with a range between \$921.1 to \$1,658 million; and (3) Google Search/local news algorithm weighting at \$129 million, with a range from \$91.9 to \$183.8 million. *Id.* at iii, 21. BIA observed that many of Google's and Facebook's other services and terms beyond the scope of its study have major impacts on local news media and that the roles of Amazon and Apple in the local news ecosystem also have increasing impact. *Id.* at 22.

²⁰⁷ *Id.* at ii, 21.

²⁰⁸ S. Fischer, K. Jaidka and Y. Lelkes, *Auditing local news presence on Google News*, 4 *Nature Human Behavior* 1236 (Dec. 2020) (finding that national news outlets dominate search results on Google News and expressing concern about diverting attention and resources away from local news); *id.* at 1243. Accord J. Legum and T. Zekeria, *How Facebook's algorithm devalues local reporting*, *Popular Information* (June 22, 2021) (explaining that Facebook's algorithms promote traffic, and thus advertising revenues, toward aggregators and away from the local news outlets, including broadcast stations, “who have to pay for the costs of the reporting,” yet “get practically nothing”); BIA Big Tech

Unsurprisingly, when Facebook went down for over five hours on October 4, 2021, traffic to online news sites rose.²⁰⁹

Due to the difficulty of earning additional ad revenues in markets dominated by the tech platforms and, increasingly, video streaming services, TV broadcasters, particularly those outside the largest markets, often struggle to earn the substantial revenues needed to support local news production. Over the period 2003-2018, news costs, on average, accounted for nearly 24 percent of TV stations' total expenses (and nearly 26 percent of the total expenses of ABC/CBS/Fox/NBC stations),²¹⁰ with many stations' news costs reaching *one third* of their total expenses.²¹¹ From 2013-2018, stations nationwide spent an average of over \$3.0 million per year producing local news, with major network affiliates expending an average of nearly \$3.6 million annually. Stations in larger markets with more resources spend much greater amounts. From 2013-2018, the average news expenses of TV stations in the ten largest markets reached almost \$9.7 million annually, while ABC/CBS/Fox/NBC stations in the top ten markets spent an average of nearly \$15.8 million annually on

Study at 21 (concluding that Facebook's and Google's opaque and frequently changing algorithms do not properly weight the value of local news content). BIA also found that broadcasters' premium news content often surfaces in search returns and news feeds alongside non-professional journalism or worse, disinformation sites, thereby damaging stations' local news brands. *Id.*

²⁰⁹ L.H. Owen, *When Facebook went down this week, traffic to news sites went up*, NiemanLab (Oct. 7, 2021) (reporting that, at the peak of the outage, net traffic to pages across the web rose by 38 percent compared to the same time the previous week).

²¹⁰ See NAB Television Financial Reports 2004 to 2019.

²¹¹ Utilizing data from NAB's Television Financial Reports, BIA found that news operations accounted for 33.5 percent and 33.1 percent of the total expenses of ABC/CBS/NBC affiliates nationwide in 2014 and 2018, respectively. BIA Advisory Services, *The Impact on the Amount of News Programming From Consolidation in the Local Television Station Industry*, at 6-7 (Sept. 23, 2020) (BIA TV News Study), attached to *Ex Parte* Communication, Gray Television, Inc., MB Docket No. 18-349 (Oct. 13, 2020).

news.²¹² News expenditure data from 2019 were comparable. The news expenses of ABC/CBS/Fox/NBC stations across the country averaged over \$3.5 million, with those stations' news expenses reaching an average of over \$16.6 million in the top-10 markets.²¹³

In addition to facing increasingly powerful digital platforms and rising costs, broadcast TV news operations continue to be affected by the COVID-19 pandemic. In response to a recent survey, more than two-thirds of TV news directors reported that their newsrooms are still experiencing significant impacts from the pandemic, including permanent physical changes to their newsrooms (35.6 percent), budget cuts (18.7 percent), and reductions in staff size (17.8 percent).²¹⁴ Ten percent mentioned “the great resignation” and/or difficulties of hiring newsroom staff.²¹⁵ The impact of COVID and other factors also can be seen in broadcast TV news profitability. In a recently published survey, the percentage of TV news directors reporting that their operations were profitable rose to 55.2

²¹² See NAB Television Financial Reports 2014 to 2019.

²¹³ NAB Television Financial Report 2020, at 36, 38. (The 2020 TV Financial Report, containing data from 2019, is the most recent report released by NAB.) In addition to significant annual operational costs, stations also make major capital expenditures (e.g., costs of constructing/remodeling studios, news sets and newsrooms; the acquisition and maintenance of production and editing equipment, station vehicles, satellite trucks, etc.) to support their news operations. The capital costs to start and then maintain a local news operation are considerable. According to the BIA TV News Study, the start-up costs for local news operations may range from nearly \$6.5 million in top-50 markets to over \$3.5 million in markets 101+. Annual costs associated with support and maintenance of capital equipment run to hundreds of thousands of dollars annually. *Id.* at 7-8.

²¹⁴ B. Papper and K. Henderson, *COVID recovery is slow for the broadcast news industry*, Radio Television Digital News Association (RTDNA) and Syracuse University Newhouse School of Communications, at 1-2 (May 17, 2022), available at: https://www.rtdna.org/uploads/files/RTDNA_Newhouse%20survey_%20COVID.pdf.

²¹⁵ *Id.* at 2.

percent in 2021, up from 51.2 percent in 2020, but these figures remain well below pre-pandemic levels (60.7 percent).²¹⁶

The duress that the tech platforms place on broadcast TV stations and their news operations is an essential matter for Commission consideration, especially given congressional intent for OTA TV to “remain a vital element in the video market.”²¹⁷ Due to growing competitive pressures on TV stations, it is more important than ever that the FCC’s broadcast regulatory regime permits broadcasters to leverage scale economies and spread their significant news production costs across more outlets, particularly in mid-sized and small markets.²¹⁸ Imposing asymmetric regulations on TV stations, including arbitrary limits on TV station ownership, will not promote investment in or the public’s access to quality broadcast journalism in the digital age. Beyond reforming the analog-era restrictions on broadcast station ownership, NAB also encourages the FCC to consider whether and how its regulatory policies slow, rather than speed, innovation in broadcast technology and services.

²¹⁶ B. Papper and K. Henderson, *TV, Radio news profits rise, but short of pre-COVID levels*, RTDNA and Syracuse University Newhouse School of Communications at 1 (May 17, 2022), available at:

https://www.rtdna.org/uploads/files/RTDNA_Newhouse%20survey_%20Business.pdf.

²¹⁷ H.R. Rep. No. 104-204, at 55 (1995), *reprinted in* 1996 U.S.C.C.A.N 10, 19; *see also id.* at 48 (enacting the 1996 Telecommunications Act “to preserve and to promote the competitiveness of over-the-air broadcast stations”).

²¹⁸ A 2021 study by the FCC’s Office of Economics and Analytics (OEA) found a strong relationship between market size and the number of independent local TV news operations, with only a limited number of larger markets able to support four independent news operations. K. Makuch and J. Levy, *Market Size and Local Television News*, OEA Working Paper 52, at 4, 21 (Jan. 15, 2021) (concluding that mergers eliminating a source of local news programming may be “optimal,” if the “merged entity improves the quality or increases the quantity of local news programming”). *See also* 2017 Reconsideration Order, 32 FCC Rcd at 9836 (observing that the evidence indicated that local news programming is one of the largest operational costs for TV stations and, thus, common ownership may enable stations “to provide more high-quality local programming, especially in revenue-scarce small and mid-sized markets”).

D. The FCC Should Facilitate Broadcasters' Technological Advancement

Broadcasters also face regulatory obstacles to investment and innovation that do not confront their competitors.²¹⁹ For example, when TV broadcasters sought to upgrade their transmission standard to ATSC 3.0, which integrates seamlessly with internet protocol, enhances spectrum efficiency, and allows broadcasters to enhance services, they had to seek FCC permission. While NAB appreciates the hard work and dedication of the FCC staff that worked on this proceeding and brought it to a close, broadcasters nonetheless had to wait a year and a half to obtain permission from the Commission to invest millions of their own dollars in their own facilities to improve a service offered free to the public.²²⁰

Other participants in the communications marketplace do not face similar regulatory speedbumps to investment and innovation, including the massive tech platforms and even other FCC licensees. Wireless carriers, for example, move from one generation of technology to the next on their own terms and on their own schedule. Not only does the FCC not require them to seek permission to do so, but the Commission also actively seeks to make additional spectrum available for those carriers to facilitate their deployment of new technologies.²²¹ Similarly, the FCC regularly seeks to make additional spectrum available for unlicensed services, which carry no public service obligations whatsoever, to encourage

²¹⁹ See Public Notice at 7 (inquiring about technological advancements, including ATSC 3.0).

²²⁰ *Authorizing Permissive Use of the "Next Generation" Broadcast Television Standard*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 9930 (2017).

²²¹ See, e.g., *Expanding Flexible Use in the 3.7-4.2 GHz Band*, Report and Order, 35 FCC Rcd 2343 (2020) (making 280 MHz of spectrum available for 5G services).

innovation and the deployment of new services.²²² In contrast, broadcasters can face years-long regulatory processes when seeking permission to offer innovative new services using the spectrum already licensed to them.²²³

NAB also observes that technological innovations in broadcasting – including those allowing local stations to expand and improve their services to the public – inevitably result in calls to increase stations’ regulatory burdens. For example, after approving broadcasters’ use of ATSC 3.0 as serving the public interest, the Commission nonetheless continued to ask whether that approval should lead to the attachment of additional regulatory strings. The FCC has repeatedly sought comment on the (supposed) implications of broadcasters’ voluntary decisions to deploy ATSC 3.0 for evaluating changes to the local and national TV

²²² See, e.g., *Unlicensed Use of the 6 GHz Band*, Report and Order and Further Notice of Proposed Rulemaking, 35 FCC Rcd 3852 (2020) (making 1200 MHz of spectrum available for Wi-Fi and other unlicensed uses).

²²³ After considering but finding it premature to consider terrestrial digital audio broadcasting (DAB) in 1990, the FCC opened a proceeding in 1999 to advance the development of terrestrial DAB and in 2002 selected in-band, on-channel (IBOC) as the technology to “permit AM and FM radio broadcasters to introduce digital operations.” First Report and Order, 17 FCC Rcd 19990, 19991 (2002). While announcing procedures allowing operating AM/FM stations to commence digital transmissions on an interim basis using the IBOC system, the FCC deferred consideration of final operational requirements and related broadcast licensing and service rule changes to a future proceeding. *Id.* at 19990. In 2004, the FCC released a further notice on rule changes necessary to facilitate adoption of DAB. Further Notice of Proposed Rulemaking and Notice of Inquiry, 19 FCC Rcd 7505, 7506 (2004) (2004 DAB Notice). In a 2007 order, the FCC adopted a number of policies and rules for DAB, while releasing another further notice seeking comment on “how to ensure that the amount of subscription-based radio services is limited.” Second Report and Order, First Order on Reconsideration and Second Further Notice of Proposed Rulemaking, 22 FCC Rcd 10344, 10345-46, 10388 (2007). In 2008, the owners of over 1200 commercial and noncommercial FM stations and the four largest broadcast transmission manufacturers requested the FCC to increase the maximum permissible FM digital effective radiated power (ERP). The FCC approved changes to its DAB technical rules in 2010, allowing FM stations to voluntarily increase FM hybrid digital ERP. Order, 25 FCC Rcd 1182 (2010).

ownership rules.²²⁴ Again, the Commission does not consider whether or how to impose further regulatory requirements on other industries as they embrace technological advances. The FCC, for instance, has not revisited its mobile spectrum holdings policies merely because wireless carriers have shifted from 3G to 4G and now to 5G.

This reflexive urge to couple broadcast innovation with additional regulatory obligations is not new. During the DTV transition, the Commission inquired about a remarkably wide range of potential new public interest requirements for TV broadcasters simply due to the congressionally-mandated switch to digital technology – which ultimately cost broadcasters millions of dollars per station and resulted in the return of previously allocated TV spectrum to the FCC.²²⁵ While these proposals drew questions, including from Commissioners, as to “why the mere use of a digital medium rather than an analog one justifies *new* public interest obligations,”²²⁶ the FCC made similar proposals five years later when seeking comment on programming and operational rules for radio stations that may voluntarily choose to utilize DAB.²²⁷

NAB continues to believe that TV and radio broadcasters’ efforts to enhance their ability to serve viewers through technological innovation (especially when doing so within the

²²⁴ See FCC, *Media Bureau Seeks to Update the Record in the 2018 Quadrennial Regulatory Review*, Public Notice, at 4, MB Docket No. 18-349, DA 21-657 (June 4, 2021); *2018 Quadrennial Regulatory Review*, Notice of Proposed Rulemaking, 33 FCC Rcd 12111, 12138 (2018); *Amendment of Section 73.3555(e) of the Commission’s Rules, National Television Multiple Ownership Rule*, Notice of Proposed Rulemaking, 32 FCC Rcd 10785, 10796 (2017).

²²⁵ See *Public Interest Obligations of TV Broadcast Licensees*, Notice of Inquiry, 14 FCC Rcd 21633 (1999) (seeking comment on requirements relating to multicasting, the TV ratings system, ancillary and supplementary services, information disclosures, EAS, mandatory minimum public interest obligations, improving access to broadcast programming for people with disabilities, diversity, and enhancing political discourse).

²²⁶ *Id.* at 21658 (Commissioner Powell, concurring) (emphasis in original).

²²⁷ See 2004 DAB Notice, 19 FCC Rcd at 7517-19.

same spectrum footprint) offer no justification for retaining outdated, asymmetric ownership restrictions, let alone for increasing regulatory burdens on the broadcast industry. There is no rational basis for viewing improvements in technology as an excuse for regulation; indeed, doing so would be a perverse disincentive for broadcaster adoption of new technologies and would not serve the public interest. Instead, the Commission should acknowledge that broadcasters often need to make significant capital investments to adopt new technologies and should prioritize promoting broadcast innovations with the potential to improve the public's TV and radio services.

In this regard, broadcasters are moving forward expeditiously to deploy ATSC 3.0 service. As of this writing, broadcasters have launched ATSC 3.0 in 52 markets covering more than half of the U.S. population.²²⁸ Broadcasters plan to launch in more than 20 additional markets through the end of the year.²²⁹ Millions of television sets with ATSC 3.0 receivers already have been sold in the U.S., and the industry expects sales of compatible sets to continue to accelerate in the near term. NAB urges the FCC to continue working collaboratively with the broadcast industry and to look for opportunities to encourage and expedite the deployment of ATSC 3.0 services across the country.

VI. CONCLUSION

Competition for audiences and advertisers in the communications marketplace is fierce and flourishing. Far from being limited to a few geographically proximate broadcast stations, consumers today enjoy an over-abundance of audio and video choices accessible from virtually anywhere, at any time, via any device. Advertisers in local markets across the

²²⁸ Pearl TV, "Where's NEXTGEN going next?" available at: <https://www.watchnextgentv.com/markets/>.

²²⁹ *Id.*

country similarly may choose from a plethora of competing ad platforms, whether traditional, mobile, or online.

NAB urges the Commission to carefully analyze all the non-broadcast sources of competition to local radio and TV stations in its biennial report and in other contexts, including its pending ownership proceedings. While correctly recognizing in previous competition reports that radio and TV broadcasters participate in broader audio and video markets that include multichannel programming distributors and online content providers, the Commission, to date, has failed to reform its broadcast regulatory regime to reflect these undisputed marketplace realities.

Respectfully submitted,

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Attachment A



The Evolution of Competition in Local Broadcast Television Advertising and the Implications for Antitrust and Competition Policy

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I. Introduction

The rapid growth of online content delivery has brought dramatic changes across the media landscape, upending traditional business models and changing the way consumers access information and entertainment of all kinds. Some of the most significant effects have been in markets for advertising. In the United States, spending by local advertisers on online advertising surpassed spending on local spot broadcast television in 2011, and the gap has widened.¹

The rapid growth of online advertising has important implications for antitrust and competition policy. As Assistant Attorney General (AAG) for Antitrust Makan Delrahim recently explained, online advertising is now ubiquitous:

What began with basic search and display advertising grew to include online video advertising, dynamic advertising, and localized digital advertising. Mobile devices such as smartphones and tablets have provided additional channels to influence consumers through advertising... At the intersection of linear television and digital advertising, it is no surprise that connected TVs exist in nearly forty percent of homes across America today.²

In 2019, with these changes in mind, the Antitrust Division (Division) of the Department of Justice (DOJ) launched an inquiry into whether advertising on local television stations is a relevant market for competition purposes (as the Division had found in prior investigations); or, instead, whether online and other alternatives are now sufficiently competitive to be considered part of the same market as local broadcast television going forward.³ As AAG Delrahim explained, “we must understand if advertisers view advertising on digital media as a substitute to television or as a useful complement.”⁴

¹ SNL Kagan, “Advertising Forecasts: 2015 Edition” (2015). SNL Kagan data covering the period from 2006 to 2015 show that the “Digital” sector first eclipsed the broadcast “Spot TV” sector in total annual local advertising revenue in 2011, with the former accruing \$12.9 billion in revenue and the latter \$11.3 billion. See, also, Derek Baine, “Rapidly Changing Video World Impacts Advertising Market,” S&P Global Intelligence (February 19, 2020). This report shows more recent S&P Global data from 2010 to 2019 and forecasted data from 2020 to 2029 and documents the widening gap between spending by local advertisers on online advertising and traditional media. In 2019, the “Digital” sector accounted for \$53.7 billion in local advertising revenue, while the “Spot TV” sector accounted for \$12.3 billion. By 2029, S&P Global forecasts this gap to grow to over \$100 billion with the former accounting for \$116.1 billion and the latter \$14.1 billion.

² Makan Delrahim, *Competition in Television and Digital Advertising: Opening Remarks* (May 2, 2019) at 4 (available at <https://www.justice.gov/atr/page/file/1202076/download>) (hereafter *Delrahim Opening Remarks*). The percent of U.S. households with connected TVs may actually be higher. Leichtman Research Group recently found that 80 percent of U.S. households have at least one Internet-connected TV device. See “80% of U.S. TV Households Have at Least one Connected TV Device,” Leichtman Research Group (June 5, 2020) (available at <https://www.leichtmanresearch.com/80-of-u-s-tv-households-have-at-least-one-connected-tv-device/>).

³ U.S. Department of Justice, “Department of Justice to Hold Workshop on Competition in Television and Digital Advertising” (April 11, 2019) (available at <https://www.justice.gov/opa/pr/departments-justice-hold-workshop-competition-television-and-digital-advertising>).

⁴ *Delrahim Opening Remarks* at 6. Our study focuses on the potential for substitution by local advertisers between advertising on digital media and advertising on broadcast television and is motivated by the Division’s focus on this potential substitution in its recent inquiry. It does not bear directly on the extent of substitution between broadcast television advertising and other forms of advertising, including specifically local advertising on cable TV.

This study presents new empirical evidence on these issues. As we explain, there is substantial contextual evidence that digital advertising delivered over both fixed and mobile broadband networks constitutes a direct substitute for local broadcast advertising, adding to existing competition from cable TV (which competes directly with broadcast for local advertising dollars) and other media. To assess empirically the growing impact of online advertising, we estimate several models of local television advertising prices over a ten-year period from 2009 through 2018, using quarterly data from approximately 200 designated market areas (DMAs).⁵

Our estimates suggest that while there was a small but statistically significant positive relationship between market concentration (as measured by both the Herfindahl-Hirschman Index (HHI) and the number of firms operating in each market) and broadcast television advertising prices at the beginning of the sample period, this relationship disappeared by the end of the period. Further, our results indicate that the dissipation of the price-concentration relationship is directly tied to the growth of digital media. Specifically:

- We estimate the relationship between the DMA-level HHI for local television broadcasters and local TV advertising prices per one thousand impressions (“cost per mille” or “CPM”) for three time periods (2009-2011, 2012-2015 and 2016-2018). For the early period, we find a small but statistically significant positive relationship, such that a 100-point increase in HHI is estimated to increase prices by 0.7 percent. However, the magnitude of the relationship declines in the middle period with the increase in price no longer statistically significant and ultimately reverses in the later period with the change in price now negative, but still not statistically significant.
- We model the impact of online advertising using DMA-level data on Facebook adoption. Specifically, we use an interaction variable to assess how varying levels of Facebook adoption (both over time and across DMAs) affect the relationship between concentration (again measured by HHI) and prices. The coefficient on the interaction term is statistically significant and negative, indicating that the relationship between concentration and prices dissipates as Facebook adoption increases. At current levels of adoption, our estimates indicate there is no statistically significant relationship between local broadcast TV HHI and ad prices, even in DMAs in which Facebook adoption is lowest.
- Our results are robust across a variety of different specifications. For example, we estimate our three-period model using the number of firms in each market as the measure of concentration instead of HHI, and again find a small but statistically significant positive relationship in the early period that disappears in the middle and later periods. Similarly, we model the effects of online advertising using YouTube adoption rather than Facebook adoption and find results very similar to those from our Facebook model.

⁵ The DOJ traditionally defines local television advertising geographic markets in terms of DMAs. See, e.g., *U.S. v. Nexstar and Tribune, Complaint*, Case No. 1:19-cv-2295 (D.C. Circ. 2019) at ¶25 (hereafter *Nexstar and Tribune Complaint*).

Overall, our results provide strong support for the proposition that advertisers now view advertising on digital platforms as a substitute for local television advertising, and that the growth in the availability of local advertising on digital platforms now disciplines pricing by local broadcasters and inhibits their ability to raise prices in the wake of consolidation or increases in market concentration. Put differently, the disappearance of the historical relationship between price and concentration where concentration is based solely on television broadcasting shares, means that the cumulation of competitive alternatives, now including digital, prevents television broadcasters from increasing advertising prices, even in cases where competition from other local television broadcasters appears to decrease. Specifically, our findings suggest that the increased availability on digital platforms of local, targeted advertising opportunities that compete directly with local broadcast television is changing the price-concentration relationship that has long been presumed to be the appropriate framework for antitrust and competition policy analyses in this industry.

Empirical evidence that the growth and evolution of digital media has changed the price-concentration relationship has three important implications for antitrust and competition policy in the television industry.

First, our findings show it would be appropriate for the Division to start its competitive analyses with the presumption that there is a relevant market that includes local broadcast television advertising as well as advertising on digital platforms and other competitive alternatives.⁶

Second, such an approach will give the Division the foundation to conduct a competitive analysis consistent with the way advertisers choose among competing advertising platforms. By gaining a broader understanding of the advantages and disadvantages of digital advertising, which may vary from market to market, the Division will be in a much better position to understand the market-specific circumstances that will determine the likely competitive impact of a proposed broadcast television merger.

Third, in a dynamic market that has seen rapid growth in digital advertising, the Division should recognize that relying on structural measures of market share and concentration based on local broadcast television revenues alone could lead the agency to infer the presence of market power when there is none.

The remainder of this report is organized as follows. Section II describes the local broadcast television advertising marketplace, explains how the DOJ traditionally has viewed competition and market definition and briefly reviews the existing literature. Section III outlines the growth of digital advertising with a specific focus on its potential impact on local broadcast television

⁶ This paper does not prescribe a specific methodology for calculating shares under the broader market definition we propose. Different methodologies could be appropriate depending on characteristics of the local marketplace dynamics and how digital competitors compete in a given region. However, our findings show that assigning no weight to digital competitors is inappropriate given the current marketplace dynamics in all regions. Put another way, our findings robustly support the related conclusions that (1) the participants in the relevant product market include both local broadcasters, digital advertisers and other competitive alternatives such as cable TV; and, (2) it is economically unsound to define a putative advertising market comprised of local broadcasters alone.

advertising. Section IV describes our econometric model of local broadcast television advertising prices and details the results of our analysis. Section V presents a brief conclusion.

II. The Role of Television in Local Advertising

The Division has long found that local television broadcasters compete primarily with each other for local advertisers.⁷ In this section, we briefly review the existing data and trends on the nature of competition in local broadcast advertising. First, we describe the Division's historical conclusions regarding competition in this space and their approach to antitrust market definition. Next, we discuss the implications of this view on the Division's review of mergers between local broadcasters. Finally, we review the empirical research that touches on the question of whether local broadcast television advertising is a distinct relevant market.

A. The Traditional View

Local television broadcasters attract viewers by providing entertainment, news and other programming⁸ and collect revenues primarily by selling two types of "spot" advertising: local spots and national spots.⁹ Local spot advertising is purchased on a station-by-station basis covering individual markets, typically by local businesses, such as car dealerships, retail stores and restaurants, that want to reach viewers within a given broadcaster's coverage area.¹⁰ It is usually purchased directly from a station's in-house sales staff.¹¹ Other local spot time is purchased by national advertisers, like automobile manufacturers and dealer groups, telecommunications companies, fast food franchisers and national retailers, to reach a particular regional or local audience. National spots are advertising slots purchased by national advertisers on multiple stations in different geographies simultaneously, usually through national sales representatives.¹² Spot advertising is distinct from network and syndicated television advertising, both of which are sold on a nationwide basis and aired in every market where the network or syndicated program

⁷ *U.S. v. Raycom Media, Inc., Complaint*, Case 1:08-cv-01510 (D.C. Cir. 2008) at 3-5; *U.S. v. Gannett Co., Inc., Belo Corp. and Sander Media LLC, Competitive Impact Statement*, Case 1:13-cv-01984 (D.C. Cir. 2013) at 5 (hereafter *Gannett and Belo CI Statement*); U.S. Department of Justice, *In the Matter of 2010 Quadrennial Regulatory Review, Ex Parte Submission of the U.S. Department of Justice*, Federal Communications Commission, MB Docket No. 09-182 (February 20, 2013) at 5.

⁸ *U.S. v. Gannett Co., Inc., Belo Corp. and Sander Media LLC, Complaint*, Case 1:13-cv-01984 (D.C. Cir. 2013) at ¶14 (hereafter *Gannett and Belo Complaint*) ("Broadcast television stations attract viewers through their programming, which is delivered for free over the air or retransmitted to viewers, mainly through wired cable or other terrestrial television systems and through satellite television systems.").

⁹ Television stations earn about two thirds (69 percent) of their revenues from selling advertising during their programs, with the remainder coming from retransmission consent (23 percent) and online revenues (seven percent). See Federal Communications Commission, *In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, 18th Report*, MB Docket No. 16-247 (January 17, 2017) at ¶¶121, 103 (hereafter *FCC 18th Video Competition Report*).

¹⁰ *FCC 18th Video Competition Report* at ¶¶121, 103, n. 326.

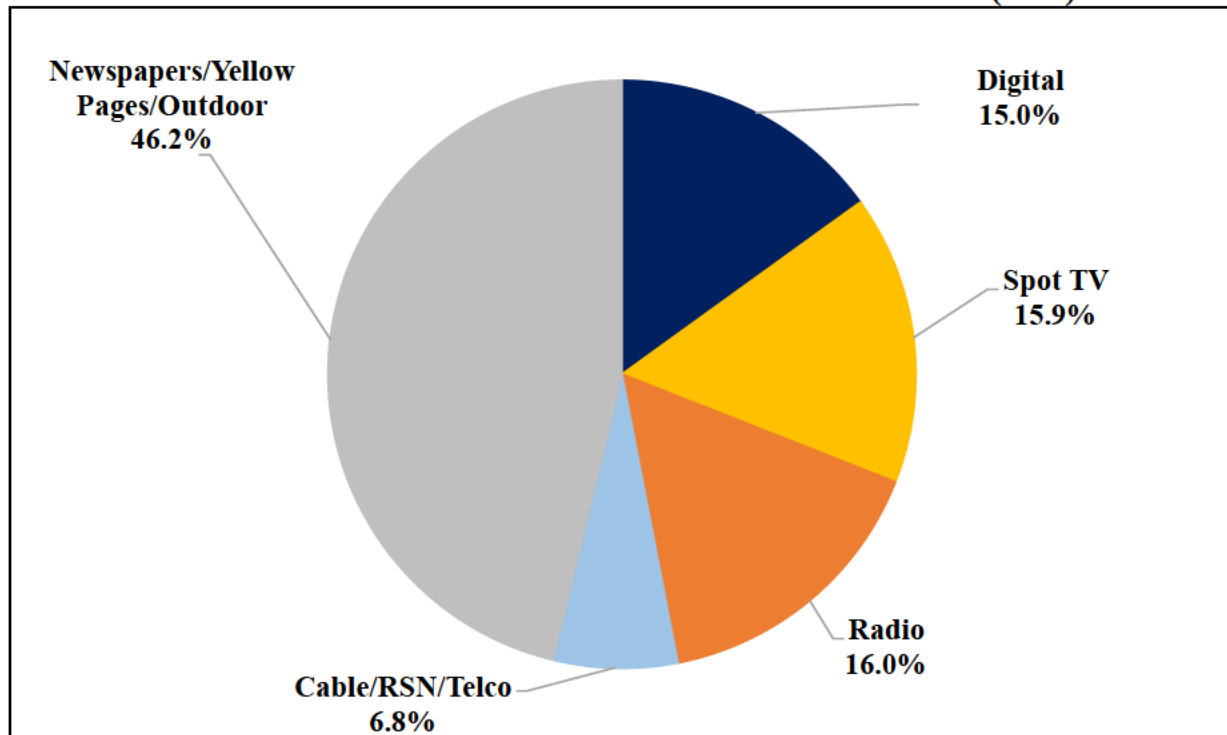
¹¹ *FCC 18th Video Competition Report* at ¶121.

¹² *FCC 18th Video Competition Report* at ¶¶103-104, n. 326.

airs.¹³ Revenues from network and syndicated advertising are earned by networks or program syndicators, not local television stations.¹⁴

Even before the recent growth of digital advertising, television broadcasting accounted for only a modest share of local advertising revenues. As shown in Figure 1, broadcast TV accounted for just 16 percent of local ad revenues in 2010, compared with 46 percent for print and outdoor (i.e., billboard) advertising, 16 percent for radio and 15 percent for digital. Cable spot advertising – which consists of local ads sold by cable systems and other multichannel video program distributors (MVPDs) and inserted into cable programming on networks like CNN and ESPN – accounted for seven percent.

**FIGURE 1:
SHARE OF TOTAL LOCAL ADVERTISING REVENUE BY OUTLET (2010)**



Source: S&P Global Market Intelligence, "US Advertising Revenue by Sector 2007-2016" (2017).

Despite broadcast TV's relatively low share of overall ad revenues, the Division has consistently found that, for at least some advertisers and some types of advertising,¹⁵ these other platforms are

¹³ *Nexstar and Tribune Complaint* at ¶33.

¹⁴ *FCC 18th Video Competition Report* at ¶103.

¹⁵ The Division has argued that local broadcasters are able to engage in price discrimination, charging supracompetitive prices to advertisers with inelastic demand for television's purportedly unique characteristics. Thus, in the Division's traditional view, even if digital platforms and other alternatives represent a reasonable substitute for some buyers, those alternatives are not sufficient to prevent the exercise of market power against others. *U.S. v. Nexstar and Media General, Complaint*, Case No. 1:16-cv-01772-JBD (D.C. Circ. 2016) at ¶21.

not “effective substitutes for broadcast television spot advertising.”¹⁶ Indeed, the Division’s explanation for that conclusion has not changed very much over time. In its eight challenges to local broadcast television mergers between 2009 and 2019, the Division made similar arguments using very similar language, arguing, for example, that “the local video advertising of [online video distributors, e.g., Hulu] lacks the reach of broadcast television spot advertising” and that “[n]on-video internet advertising (e.g., website banner advertising) lacks the important combination of sight, sound, and motion that gives television its impact.”¹⁷ The Division’s 2019 complaint challenging the combination of Nexstar and Tribune expanded somewhat on its earlier explanations, highlighting three specific characteristics which it says differentiate broadcast TV from digital advertising:

- (1) *Ad quality*: Digital ads often lack “the combination of sight, sound and motion that makes television spot advertising particularly impactful and memorable and therefore effective for advertisers;”¹⁸
- (2) *Reach*: Broadcast television ads reach a “different audience” than digital advertisements; specifically, broadcast television spots are used “to reach a large percentage of households in a DMA,” while digital advertisements are targeted either “very broadly, such as nationwide or regional, or to a smaller geographic target, such as a city or a zip code, or to narrow demographic subsets of a population;”¹⁹ and,
- (3) *Inventory*: Digital platforms’ “inventory of ad-supported, high quality, long-form video” is “limited” in comparison to advertising opportunities on broadcast TV.²⁰

The Division also acknowledged in the Nexstar and Tribune complaint that “technological changes may make other categories of advertising closer substitutes for advertising on broadcast television in the future.”²¹ As we explain in Section III, there are good reasons to believe that the developments described by the Division in the Nexstar and Tribune complaint are already well underway.

B. Implications of a Narrow Market Definition

It is widely recognized that mergers can create welfare-enhancing efficiencies but also result in the creation of market power and thus harm competition. A primary objective of antitrust policy

¹⁶ *Nexstar and Tribune Complaint* at ¶¶46-47 (noting that “[a]dvertisers likely would not respond to a small but significant non-transitory increase in the price of broadcast television spot advertising by switching to other forms of advertising – such as cable, digital, print, radio or billboard advertising – in sufficiently large numbers to make the price increase unprofitable.”); *Gannett and Belo Complaint* at ¶15 (“For a significant number of advertisers, broadcast television spot advertising, because of its unique combination of attributes, is an advertising medium for which there is no close substitute.”).

¹⁷ See, e.g., *U.S. v. Gray Television, Inc. and Schurz Communications, Inc., Complaint*, Case No. 1:15-cv-02232-RC (D.C. Circ. 2015) at ¶21. In *U.S. v. Gray Television, Inc. and Raycom Media, Inc., Complaint*, Case No. 1:18-cv-2951 (D.C. Circ. 2018) at ¶¶41-42, the Division also argued that digital ads differ from TV ads because they are susceptible to being “skipped, minimized, or blocked” and are used to generate an immediate response (while TV is used for brand awareness). Although our study does not focus on the potential substitution between broadcast TV and cable TV ads, both broadcast TV and cable TV ads are indistinguishable based on this factor.

¹⁸ *Nexstar and Tribune Complaint* at ¶43.

¹⁹ *Nexstar and Tribune Complaint* at ¶44.

²⁰ *Nexstar and Tribune Complaint* at ¶45.

²¹ *Nexstar and Tribune Complaint* at ¶38. In addition to digital, the Division also noted that technological advancements may be making cable TV ads more substitutable for broadcast TV ads.

is to distinguish between beneficial mergers and harmful ones, sometimes referred to as minimizing the sum of Type I error (failing to approve a beneficial merger) and Type II error (failing to block a harmful one).²² Use of an overly narrow market definition is likely to generate Type I errors by overstating the increase in market concentration and market power created by a merger, thus depriving consumers of the welfare-enhancing benefits of merger efficiencies.²³

While the ultimate objective of merger analysis is to assess competitive effects, market definition has been and remains an important component of the analytical process in assessing those effects.²⁴ As the DOJ/FTC *Horizontal Merger Guidelines* (Merger Guidelines) explain, market definition involves identifying available demand-side substitutes for the product or service at issue:

Market definition focuses solely on demand substitution factors, *i.e.*, on customers' ability and willingness to substitute away from one product to another in response to a price increase or a corresponding non-price change such as a reduction in product quality or service.²⁵

To determine whether a group of candidate products constitutes a relevant product market, the Merger Guidelines invoke the "Hypothetical Monopolist Test" (also referred to as the "SSNIP Test").²⁶ The test examines whether a hypothetical monopolist over all products in a candidate product market could profitably raise prices by a small amount²⁷ – *i.e.*, whether it could profitably impose a small but significant and non-transitory increase in price, or SSNIP.²⁸ If, in the candidate market, a SSNIP imposed by a hypothetical monopolist would lead consumers to substitute to other products in such numbers as to render the price increase unprofitable, additional products are added to the proposed market until such a price increase would be profitable. Determining the universe of reasonable substitutes is thus the essence of proper market definition.

Proper market definition is essential for accurately calculating measures of concentration, such as the HHI.²⁹ Defining the market too broadly would understate actual market shares and other measures of concentration, and thus obscure the potential for post-merger price increases and/or reductions in output or quality. Defining the market too narrowly, on the other hand, would result

²² See, e.g., Alan Devlin and Michael Jacobs, "Antitrust Error," *William and Mary Law Review* 52:1 (2010) 75-132 at 106 ("Within the context of mergers, a Type I error occurs when an acquisition that would not create a substantial lessening of competition is prohibited. Conversely, a Type II error arises when an anticompetitive merger is approved.")

²³ Type I errors, or false positives, can eliminate "win-win situation[s]" that "occur when the merger enhances efficiency through, for example, lower cost, better products, and innovation." W. Kip Viscusi, Joseph Harrington and David Sappington, *Economics of Regulation and Antitrust* (The MIT Press, 2018) at 218.

²⁴ U.S. Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines* (August 19, 2010) at 7 (hereafter *Merger Guidelines*) ("In any merger enforcement action, the Agencies will normally identify one or more relevant markets in which the merger may substantially lessen competition.").

²⁵ *Merger Guidelines* at 7.

²⁶ *Merger Guidelines* at 8-10.

²⁷ *Ibid.*

²⁸ *Merger Guidelines* at 10 ("The Agencies most often use a SSNIP of five percent of the price paid by customers for the products or services to which the merging firms contribute value.").

²⁹ *Merger Guidelines* at 7 ("...market definition allows the Agencies to identify market participants and measure market shares and market concentration.").

in overstating market shares and measures of concentration, which may overstate the potential for anticompetitive effects.

In the case of local broadcast TV advertising, a narrow market definition leads directly to the conclusion that most markets are highly concentrated and thus presumptively prone to the exercise of market power.³⁰ Indeed, from 2009 to 2018, the median number of firms in local television markets (defined as DMAs) was five, and the median level of concentration (measured by HHI) was 2,930, well above the Division’s threshold for a “highly concentrated” market.³¹ It is hardly surprising, then, that DOJ has repeatedly challenged proposed mergers involving local television broadcasters on the grounds that they would result in unacceptably high levels of market concentration. As shown in Table 1, since 2013, the Division has obtained divestitures of local stations in eight transactions.³²

In these transactions, the Division consistently alleged that the sale of broadcast television spot advertising constitutes a relevant product market that specifically excludes advertising on digital platforms.³³ Based on this market definition, the Division has used the same share-based evidence to support its arguments that the proposed mergers would lead to competitive harm. In all eight transactions challenged between 2009 and 2019, the Division has calculated, using DMA-level markets limited to broadcast television spot advertising, HHI increases of at least 200 points and a post-merger HHI in excess of 2,500. Based on these calculations, the Division has argued that the mergers “are presumed to be likely to enhance market power.”³⁴ Thus, the Division’s narrow market definition for local TV broadcast advertising has been and remains a crucial driver of its enforcement decisions, leading directly to divestitures.

³⁰ The Merger Guidelines define a “highly concentrated” market as one with a post-transaction HHI of 2,500 or higher. In such markets, an HHI increase of more than 100 points is presumed to “raise significant competitive concerns” while an increase of more than 200 points is “presumed to be likely to enhance market power.” *Merger Guidelines* at 19; *Nexstar Tribune Complaint* at ¶27 (“The more concentrated a market would be as a result of a proposed merger, the more likely it is that the proposed merger would substantially lessen competition.”).

³¹ BIA Kelsey, Media Access Pro Database.

³² See *Gannett and Belo CI Statement* at 5; *U.S. v. Gray Television, Inc. and Raycom Media, Inc., Competitive Impact Statement*, Case 1:18-cv-02951 (D.C. Circ. 2018) at 8; *Gannett and Belo Complaint* at ¶14. The FCC has also restricted local television mergers, though on somewhat different grounds. See Federal Communications Commission, *In the Matter of the Applications of Tribune and Nexstar, Memorandum Opinion and Order*, MB Docket No. 19-30 (September 16, 2019).

³³ These alleged relevant markets also include other potential substitutes, including cable TV.

³⁴ See, e.g., *U.S. v. Media General, Inc. and Lin Media LLC, Complaint*, Case No. 1:14-cv-01823 (D.C. Circ. 2014) at ¶20.

**TABLE 1:
CONSENT DECREES IN ANTITRUST DIVISION REVIEWS OF BROADCAST TV MERGERS
(2009-2019)**

Transaction	Announcement Date	Completion Date	Description	Divestiture(s)
Nexstar/CCA	April 24, 2013	January 01, 2015	Nexstar acquired 19 stations from CCA in ten markets for \$270 million.	WEVV-TV in Evansville, IN
Gannett/Belo	June 13, 2013	December 23, 2013	Gannett acquired 21 stations from Belo in 16 markets for \$1.5 billion.	KMOV-TV in St. Louis, IL-MO
Sinclair/Allbritton	July 29, 2013	July 31, 2014	Sinclair acquired nine stations from Allbritton in seven markets for \$963 million.	WHTM-TV in Harrisburg-Lancaster-Lebanon-York, PA
Media General/LIN	March 21, 2014	December 19, 2014	Media General acquired 47 stations from LIN in 24 markets for \$1.5 billion.	WVTM-TV in Birmingham, AL; WJCL and WTGS in Savannah, GA; WALA-TV in Mobile, AL-Pensacola, FL; WJAR in Providence, RI; WLUK-TV and WCWF in Green Bay, WI
Gray/Schurz	September 14, 2015	February 16, 2016	Gray acquired Schurz (14 stations in seven markets) for \$440 million.	WSBT-TV in South Bend, IN and KAKE-TV in Wichita, KS
Nexstar/Media General	September 28, 2015	January 17, 2017	Nexstar acquired 73 stations from Media General in 49 markets.	WBAY-TV in Green Bay, WI; WSLS-TV in Roanoke, VA; KADN-TV and KLAF-LD in Lafayette, LA; WTHI-TV in Terre Haute, IN; WFFT-TV in Ft. Wayne, IN and KWQC-TV in Davenport-Rock Island-Moline, IA-IL
Gray/Raycom	June 25, 2018	January 02, 2019	Gray acquired Raycom (70 stations in 44 markets) for \$3.6 billion.	WTNZ in Knoxville, TN; WTOL in Toledo, OH; KXXV and KRHD-CD in Waco, TX; WTXL-TV in Tallahassee, FL-Thomasville, GA; WFXG in Augusta, GA; KWES-TV in Odessa, TX; WPGX in Panama City, FL; WSWG in Albany, GA and WDFX-TV in Dothan, AL
Nexstar/Tribune	December 03, 2018	September 19, 2019	Nexstar acquired Tribune (44 stations in 33 markets) for \$6.4 billion.	KCWI-TV and WOI-DT in Des Moines, IA; KFSM-TV in Ft. Smith, AR; KSTU in Salt Lake City, UT; WATN-TV in Memphis, TN; WCCT-TV and WTIC-TV in Hartford-New Haven, CT; WGNT and WTKR in Norfolk, VA; WISH-TV and WNDY-TV in Indianapolis, IN; WLMT in Memphis, TN; WNEP-TV in Wilkes Barre-Scranton, PA; WPMT in Harrisburg-Lancaster-Lebanon-York, PA; WQAD-TV in Davenport, IA; WTVR-TV in Richmond, VA; WXMI in Grand Rapids, MI and WZDX in Huntsville, AL

Sources: S&P Global Market Intelligence, *TV Transaction History by Market* (2020); U.S. Department of Justice, "Antitrust Case Filings" (available at <https://www.justice.gov/atr/antitrust-case-filings>).

C. Previous Research on Whether Local Broadcast Television Advertising Constitutes a Distinct Relevant Market

Previous empirical analyses of local broadcast television advertising markets raise significant questions about whether local broadcast television advertising constitutes a distinct product market. This section briefly reviews the most relevant literature.

First, in a 2000 paper, Ekelund, Ford and Jackson utilized data from 101 DMAs to estimate the own-price elasticity of market demand for local broadcast television advertising.³⁵ Their findings indicated that local television advertising did not satisfy the Merger Guidelines' SSNIP test – i.e., they found that a hypothetical television advertising monopolist could not profitably sustain a five percent price increase.³⁶ At about the same time, a 2001 dissertation by Rainey utilized panel data from 160 DMAs from 1993 to 1998 to examine the effects of mergers between local broadcasters and found that “most mergers do not lead to significant increases in the price of advertising,”³⁷ as would be expected if local broadcast advertisers constituted a distinct product market.

More recently, two studies by Caves and Singer failed to find evidence of a relationship between local television market structure and advertising prices. Their 2014 paper analyzed data on two common measures of broadcast advertising prices (the cost per-thousand impressions and cost per-point)³⁸ for 210 local markets from 2004 to 2013 to assess the relationship between prices and HHIs.³⁹ Failing to find a statistically significant relationship, they concluded that their “results are inconsistent with the DOJ’s position”⁴⁰ that local broadcast television advertising is a distinct relevant market, and “consistent with the position that local broadcasting prices are disciplined by offerings from cable television and other non-broadcast media alternatives.”⁴¹

³⁵ Robert B. Ekelund, Jr., George S. Ford and John D. Jackson, “Are Local TV Markets Separate Markets?” *International Journal of the Economics of Business* 7:1 (2000) 79-97 (hereafter Ekelund *et al* (2000)).

³⁶ Ekelund *et al* (2000) at 92 (“Our study attempts to answer one important question – is local TV advertising a separate and definable market for antitrust purposes? Utilizing an operational test based on the *Merger Guidelines* criterion and controlling for important factors, we find that substantial substitutability within that market is present. Our results support assertions that TV markets do not appear to be a separate interest for antitrust[.]”).

³⁷ Mark C. Rainey, *The Effects of Mergers in Broadcast Television*, MIT Doctoral Dissertation (2001) 1-97 at 59-60.

³⁸ *FCC 18th Video Competition Report* at ¶105 (“Local advertisers typically use the cost per rating point (CPP) measure to value advertising time, which represents how much it costs to buy one rating point, or one percent of the population in an area being evaluated... Advertisers assess the relative expense and efficiency of delivering a message via different media, e.g., a broadcast network compared with a group of broadcast television stations, on the basis of cost per thousand households (CPM).”).

³⁹ Kevin Caves and Hal Singer, *In the Matter of 2014 Quadrennial Regulatory Review, Appendix A of the Comments of the National Association of Broadcasters: Competition in Local Broadcast Television Advertising Markets*, Federal Communications Commission (August 4, 2014) (hereafter Caves and Singer (2014)).

⁴⁰ Caves and Singer (2014) at ¶35.

⁴¹ Caves and Singer (2014) at ¶35. Caves and Singer (2014) also estimated models using two other measures of market structure: (1) the presence of a “duopoly” (defined in broadcasting as ownership of two stations in the same geographic market owned by the same firm); and (2) the presence of a joint sales or joint operating agreement (JSA or SSA) between two stations. They found no statistically significant relationship between advertising prices and duopoly and (depending on the specification) either no relationship or an inverse relationship between JSAs/SSAs and

Caves and Singer's 2016 paper analyzes slightly more recent data on quarterly broadcast advertising prices for 210 local markets from 2006 to 2015 to assess whether prices are affected by the number of independent television stations serving a given local market. This paper was an analysis of whether the FCC's "eight voices" rule could be justified by its effects on competition in local advertising markets.⁴² Again, they estimated several different specifications and found either no statistically significant relationship between prices and market concentration or, in some specifications, an inverse relationship.⁴³

Lastly, a 2016 study by Stahl, published in the *American Economic Review*, analyzed data on over 1,200 U.S. broadcast stations (including market characteristics, ownership, viewership, revenue, population coverage and network affiliation) from 1996 to 2007 to examine the effects of deregulation-driven station consolidation on station profitability, programming quality and prices.⁴⁴ Stahl's results indicate that consolidation "led to huge increases in profitability for the industry,"⁴⁵ which she attributes primarily to merger-generated cost-savings (i.e., efficiencies) from the consolidation of stations in the same local markets:

The biggest drivers of cost savings were consolidation within local markets... It is noteworthy that within-market consolidation was such an important cost saver, because the rule change that allowed for joint ownership within a market was controversial. Critics worried that cost-cutting at jointly owned stations would hurt programming quality. However, there is no evidence that this cost-cutting came at the expense of viewers; I find that within-market mergers, if anything, boosted viewership.⁴⁶

While none of these studies supports the Division's traditional view that local television advertising constitutes a relevant market for antitrust purposes, the Division has not found this evidence sufficient to overturn that presumption. As we explain in the following section, the rapid

prices. The FCC found that the Caves and Singer 2014 study was methodologically flawed. Federal Communications Commission, *In the Matter of 2014 Quadrennial Regulatory Review, Second Report and Order*, MB Docket 14-50 (August 25, 2016) at ¶29 (noting that "[w]ith regard to the Singer/Caves [2014] study, we do not find the study relevant or informative in this proceeding for multiple reasons.").

⁴² Kevin Caves and Hal Singer, *In the Matter of 2014 Quadrennial Regulatory Review, Attachment to National Association of Broadcasters Notice of Ex Parte Communication: An Economic Analysis of the FCC's Eight Voices Rule*, MB Docket No. 14-50 (July 19, 2016) (hereafter Caves and Singer (2016)).

⁴³ Caves and Singer (2016) at ¶45. Caves and Singer (2016) interpreted the finding of an inverse relationship as consistent with other research showing significant economies of scale and scope in broadcast television. *See e.g.*, Jeffrey Eisenach and Kevin Caves, *The Effects of Regulation on Economies of Scale and Scope in TV Broadcasting*, Navigant Economics (June 2011) (available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1894941).

⁴⁴ Jessica Calfee Stahl, "Effects of Deregulation and Consolidation of the Broadcast Television Industry," *American Economic Review* 106:8 (2016) 2185-2218 at 2189-90 (hereafter Stahl (2016)) ("A third approach, which I use to estimate viewership and revenue effects of consolidation, is to make use of exogenous regulatory changes that prompt merger activity.").

⁴⁵ Stahl (2016) at 2186.

⁴⁶ Stahl (2016) at 2187. Stahl further explains that she finds "modest increases in revenue per viewer for stations that are jointly-owned with another station in the same local market," which suggests that within-market mergers may have allowed stations to exercise limited pricing power, though "not to an alarming degree."

growth and changing characteristics of digital media provide fresh evidence warranting a re-examination.

III. Implications of the Rapid Growth and Development of Digital Media Platforms

In this section, we discuss recent growth in the quantity and variety of digital media available to advertisers, including the expansion of video offerings from digital media platforms like Google/YouTube and Facebook, as well as online video distributors (OVDs) like Netflix and Amazon Prime Video and, especially, advertising-supported video on demand services (AVODs) like Hulu, YouTube TV and Sling TV.⁴⁷ As we explain, the evidence strongly suggests that, today, these platforms compete directly with broadcast television for local advertising revenues, as there are fewer customers who cannot access broadcast television's purported unique characteristics through digital media.

A. Broadcast Television's Audience Share has been Declining

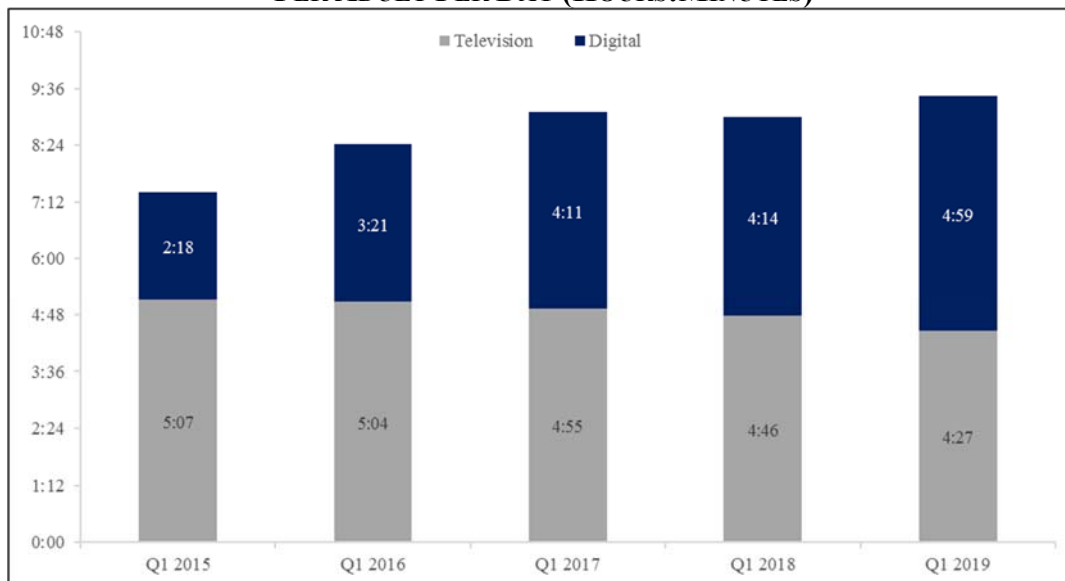
While local broadcast television remains an important component of the modern media marketplace, its share of the video viewership has been declining for many years, more recently in conjunction with a decrease in traditional linear television viewership generally.⁴⁸ As shown in Figure 2, daily time spent viewing live and DVR/time-shifted TV (including cable as well as broadcast) among all U.S. adults (18 years or older) decreased between 2015 and 2019 (from five hours and seven minutes per day to four hours and 27 minutes per day), while time spent engaged with online content (whether by computer, tablet or smartphone or other Internet connected device) increased dramatically (from two hours and 18 minutes per day to four hours and 59 minutes per day). Overall, linear television viewing (including both live and time-shifted) declined from 70 percent to 47 percent of television and digital media viewing time, while digital viewing time increased from 31 percent to 53 percent.⁴⁹

⁴⁷ Online video distributors (commonly referred to as "streaming video services") are defined by the FCC as entities that distribute video programming by means of the Internet. *FCC 18th Video Competition Report* at ¶1, n. 4 (stating that the FCC "define[s] an OVD as 'an entity that distributes video programming (1) by means of the Internet or other Internet Protocol (IP)-based transmission path; (2) not as a component of an MVPD subscription or other managed video service; and (3) not solely to customers of a broadband Internet access service owned or operated by the entity or its affiliates.'").

⁴⁸ PwC, *Internet Advertising Revenue Report: 2019 First Six Months Results* (October 2019) at 8 (hereafter *PwC Advertising Report*) (available at <https://www.iab.com/insights/internet-advertising-revenue-2019-half-year/>) ("From the launch of broadcast TV over 90 years ago to the growth of cable in the 1980's and satellite TV in the 1990's, to the migration from linear to internet-based digital video, the complexity of the video ecosystem continues to evolve with virtual MVPDs, streaming and social video platforms, and free and ad-supported streaming services.").

⁴⁹ Nielsen, *The Nielsen Total Audience Report Q1 2017* (2017) at 13 (hereafter *Nielsen Audience Report 2017*) (available at <http://3xyemy1let2g2jeg0pea76v1.wpengine.netdna-cdn.com/wp-content/uploads/NLSN.pdf>); All Access, "Nielsen's 'Total Audience Report' for Q1 2019 Has Solid News for Radio" (July 1, 2019) (hereafter *All Access Nielsen Audience Report 2019*) (available at <https://www.allaccess.com/net-news/archive/story/187552/nielsen-s-total-audience-report-for-q1-2019-has-so>). The following Nielsen categories are omitted from the calculation of total time spent engaged with digital: AM/FM Radio, DVD/Blu-Ray Device and Game

**FIGURE 2:
AVERAGE TIME ENGAGED WITH TELEVISION AND DIGITAL MEDIA CONTENT
PER ADULT PER DAY (HOURS:MINUTES)**



Sources: Nielsen Audience Report 2017; All Access Nielsen Audience Report 2019. Note: Time spent on viewing television is calculated by summing the Live TV and DVR/Time-shifted TV Nielsen categories, and time spent on digital is calculated by summing the following Nielsen categories: Multimedia Device, Internet Connected Device, Internet on a PC, App/Web on a Smartphone and App/Web on a Tablet.

Further, an increasing proportion of viewers now rely on digital media for content like scripted series and local news, which previously were the domain of local television stations.⁵⁰ For example, a 2019 study by the Pew Research Center found that nearly as many Americans prefer to get their local news online as from television,⁵¹ that 68 percent of Americans get at least a portion of their

Console. Academic research suggests that computers and smartphones are in fact direct substitutes for real-time television viewing. See Shinjae Jang and Minsoo Park, “Do New Media Substitute for Old Media? A Panel Analysis of Daily Media Use,” *Journal of Media Economics* 29:2 (2016) 73-91.

⁵⁰ Jason Lynch, “As Linear Ratings Continue to Slide, Buyers Say Those Viewers Will ‘Never’ Return,” *Adweek* (September 27, 2019) (available at <https://www.adweek.com/tv-video/as-linear-ratings-continue-to-slide-buyers-say-those-viewers-will-never-return-to-tv/>) (“But the reality is that linear ratings will continue to plummet this season, as viewing habits continue to rapidly change as a result of cord-cutting and a glut of current and new streaming services. Last season, three out of five broadcasters saw double-digit declines in 18-49 ratings versus the previous season... Over the past decade, 18-49 ratings have plummeted between 43% and 59% across the big four broadcast networks.”); FX Research, *U.S. Department of Justice Public Workshop on Competition in Television and Digital Advertising, Attachment D to Comments of the National Association of Broadcasters*, U.S. Department of Justice (June 17, 2019) (showing that broadcast television accounted for over 74 percent of scripted series in 2002, but as of 2018, broadcast’s share of scripted series had fallen to less than 30 percent); U.S. Department of Justice, “Competition in Television and Digital Advertising: Transcript of the Proceedings at the Public Workshop” (May 2-3, 2019) at 82 (hereafter *DOJ Workshop Transcript*) (“With the rise of 4G and unlimited data plans, every screen is a TV. To my nineteen-year-old son, a mobile phone like this is his TV. His viewing of over-the-air television stations in the past year can be counted in minutes, not hours. But like much of his generation, his viewing of long- and short-form video programming on his mobile device can be counted in weeks. True.”).

⁵¹ Pew Research Center, “Nearly as Many Americans Prefer to Get Their Local News Online as Prefer the TV Set” (March 26, 2019) (available at <https://www.journalism.org/2019/03/26/nearly-as-many-americans-prefer-to-get-their-local-news-online-as-prefer-the-tv-set>).

news from social media,⁵² and that 43 percent rely on Facebook for news content.⁵³ The same study noted that YouTube, which concentrates only on video, is also relied upon as a news source by 21 percent of Americans.⁵⁴ To the extent that local advertisers advertise on broadcast television in order to reach viewers of the type of programming that appears on broadcast television, such viewers are now reachable through digital media. This means that local broadcasters would be less likely to be able to charge supracompetitive prices to advertisers wanting to access these viewers.

This erosion in traditional television viewership has coincided with the explosion of digital media platforms. By 2018, broadcasters were competing for viewers' attention not only with Google, YouTube, Facebook and Twitter (and the online video content they offer),⁵⁵ but also with over 200 distinct streaming video services that offer linear-streaming programming, video-on-demand or both.⁵⁶ Much of the content viewed via digital platforms is literally the same as what was once on broadcast: A Nielsen survey found that "[t]he top things [streaming consumers] watched were existing shows they used to watch on broadcast media..."⁵⁷ Furthermore, digital media platforms also offer the same type of original content once only found on local broadcast and cable television. For example, FX Network's 2018 annual survey on the state of scripted television programs found that online services accounted for 32 percent of all scripted original television series.⁵⁸

⁵² Elisa Shearer and Katerina Matsa, "News Use Across Social Media Platforms 2018," Pew Research Center (September 10, 2018) (available at <https://www.journalism.org/2018/09/10/news-use-across-social-media-platforms-2018>).

⁵³ *Ibid.*

⁵⁴ *Ibid.*

⁵⁵ Sapna Maheshwari and John Koblin, "Why Traditional TV Is in Trouble," *The New York Times* (May 13, 2018) (hereafter *NYT Traditional TV in Trouble*) (available at <https://www.nytimes.com/2018/05/13/business/media/television-advertising.html>).

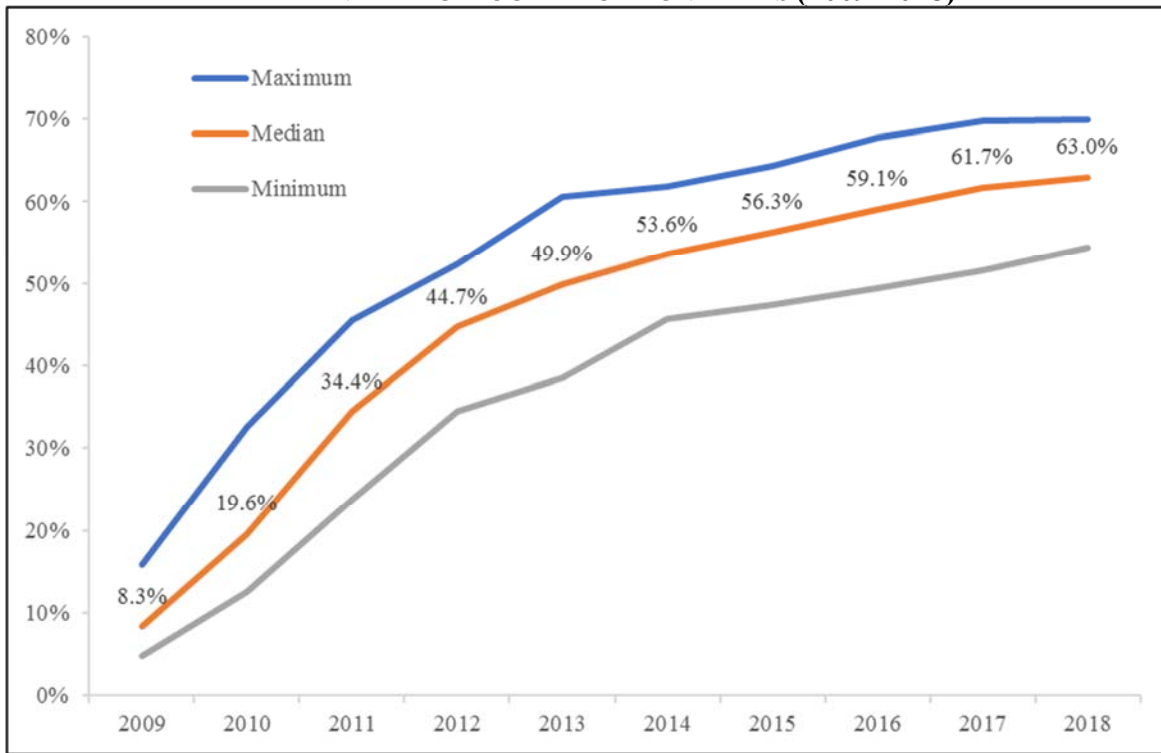
⁵⁶ Toni Fitzgerald, "How Many Streaming Video Services Does the Average Person Subscribe To?" *Forbes* (March 29, 2019) (available at <https://www.forbes.com/sites/tonifitzgerald/2019/03/29/how-many-streaming-video-services-does-the-average-person-subscribe-to/#5f6dae156301>); National Association of Broadcasters, *U.S. Department of Justice Public Workshop on Competition in Television and Digital Advertising, Comments of the National Association of Broadcasters*, U.S. Department of Justice (June 17, 2019) at 4 (hereafter *NAB Workshop Comments*) (citing Chris O'Dell, "Over 200 OTT Services Now Available in U.S. Market Alone," *Parks Associates* (August 13, 2018)); *FCC 18th Video Competition Report* at ¶73 ("Advances in technology continue to provide both benefits and challenges for broadcast television stations. Industry participants note that video delivery options and programming alternatives such as MVPDs, OVDs, mobile devices, DVRs, and home video entertainment systems continue to fractionalize television viewing and audiences, expand the number of outlets for advertisers, and impact competition for the acquisition of programming.").

⁵⁷ Jon Lafayette, "Traditional TV Still Sinking in Stream of Digital Video," *Broadcasting and Cable* (March 19, 2019) (available at <https://www.broadcastingcable.com/news/traditional-tv-still-sinking-in-stream-of-digital-video>).

⁵⁸ Lesley Goldberg, "Peak TV Update: Scripted Originals Hit Yet Another High in 2018," *The Hollywood Reporter* (December 13, 2019) (available at <https://www.hollywoodreporter.com/live-feed/peak-tv-update-scripted-originals-hit-high-2018-1169047>).

The evidence also demonstrates that these digital outlets are reaching a significant proportion of viewers both nationally and locally. For example, as shown in Figure 3, Facebook’s median adoption rate (as measured by the number of adults 18 years or older in a given DMA who reported having used Facebook within the past 30 days) across the U.S. increased from just over eight percent in 2009 to approximately 63 percent in 2018. Even in DMAs with the lowest adoption rates, more than 54 percent of adults used Facebook at least once monthly in 2018.

**FIGURE 3:
DMA-LEVEL FACEBOOK ADOPTION RATES (2009-2018)**



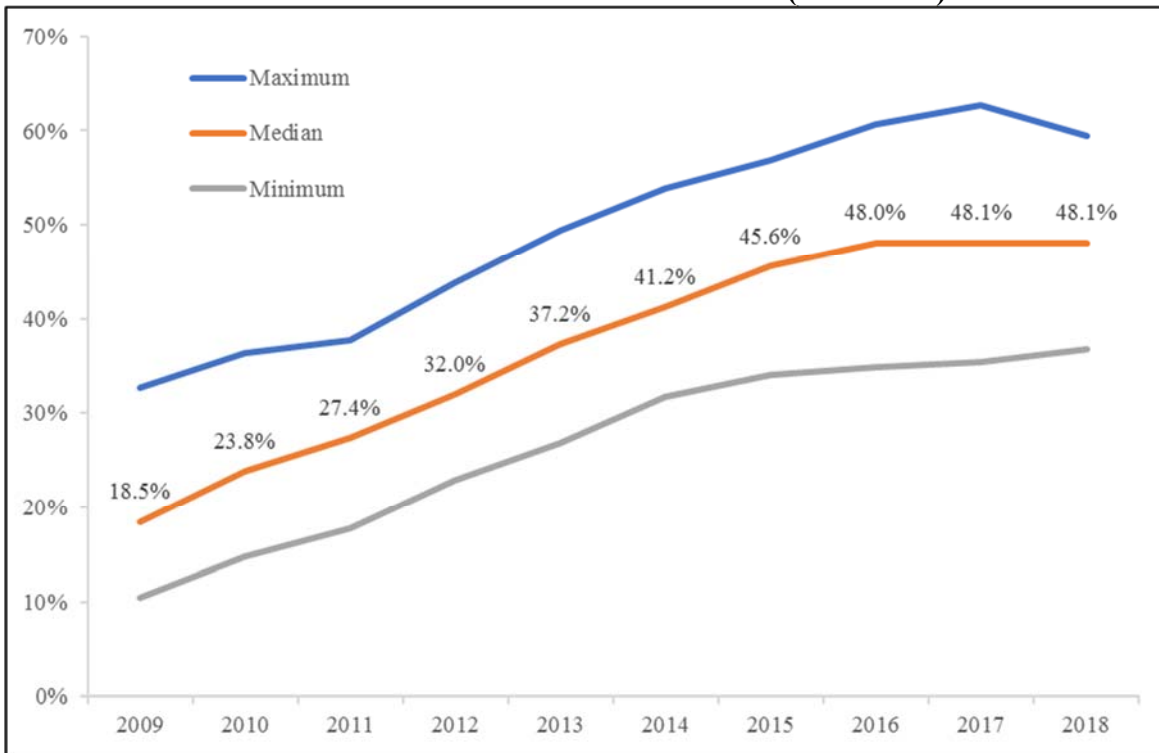
Source: MRI-Simmons data.

As shown in Figure 4, YouTube’s adoption rates show a similar steady increase, rising from a median adoption rate of 18.5 percent in 2009 to almost 50 percent in 2018. Even in DMAs with the lowest adoption rates, more than 30 percent of adults use YouTube at least once monthly. YouTube has made its broad reach a centerpiece of its pitch to advertisers, noting that, in 2019, viewers watched over 200 million hours of video content on YouTube on TV sets per day.⁵⁹ Thus, advertisers reaching consumers through online video content are not limited to viewers watching programming on computers and handheld devices. Increasingly, these viewers can be reached via

⁵⁹ Sahil Patel, “The Next Front of the Streaming Wars Is the Battle for Ad-Supported Programming,” *Digiday* (April 19, 2019) (hereafter *Digiday Next Front of Streaming*) (available at <https://digiday.com/media/inside-race-scramble-ad-supported-ott/>). See, also, Todd Spangler, “YouTube Now Has 2 Billion Monthly Users, Who Watch 250 Million Hours on TV Screens Daily,” *Variety* (May 3, 2019) (available at <https://variety.com/2019/digital/news/youtube-2-billion-users-tv-screen-watch-time-hours-1203204267/>) (noting that as at the start of 2019, 17.7 percent of 18- to 34-year-olds reported YouTube as the most watched platform on TV sets compared to just 6.0 percent reporting broadcast television).

online video content on the same TV sets once reserved solely for broadcast and cable programming.

**FIGURE 4:
DMA-LEVEL YOUTUBE ADOPTION RATES (2009-2018)**



Source: MRI-Simmons data.

Other AVODs like Hulu and Roku have gained traction with U.S. viewers.⁶⁰ Hulu⁶¹ – which boasted over 93 million unique digital video viewers per month in the second quarter of 2019 – is

⁶⁰ OVDs differentiate themselves in part through the specific video content they offer (that is, their libraries of original and syndicated TV series and movies) and in part through the extent to which they present viewers with advertising. Subscription-based online video distributors (subscription video on demand, SVODs) feature ad-free programming, while ad-supported online video distributors (ad-based video on demand, AVODs) eschew subscription fees and instead offer video content interspersed with varying amounts of pre, mid or post-content advertisements. Some platforms, like Hulu, have adopted hybrid SVOD/AVOD business models, offering different subscription tiers (with lower-priced plans exposing viewers to advertising more frequently than more expensive plans). See Seth Shafer, “State of US Online Video: Ad-Supported Video,” S&P Global (November 7, 2019) (hereafter *S&P State of Online Video*) (explaining that AVOD services “operate under the traditional free ad-supported video-on-demand” model, “offering movies, TV series and short-form video content available to watch for free as long as users are willing to sit through video ads[.]”).

⁶¹ Netflix and Amazon Prime are ad-free subscription (SVOD) services, while Hulu offers different subscription options, several of which expose viewers to ads. Hulu Help Center, “Ads on Hulu” (November 14, 2019) (available at https://help.hulu.com/s/article/ads-on-hulu?language=en_US) (“Whether or not you run into ads on Hulu will depend on which plan you subscribe to, and we offer different ones for you to choose from. Hulu and Hulu + Live TV subscribers will see limited ads while streaming on-demand content included in the Hulu streaming library. Hulu (No Ads) and Hulu (No Ads) + Live TV subscribers will be able to stream that same library of content without interruption.”).

the largest AVOD, with 70 percent of its viewers opting for its ad-supported service.⁶² Other major AVODs include Roku’s Roku Channel (with 36.9 million active user accounts at the end of 2019),⁶³ Walmart’s Vudu (with over 25 million registered users),⁶⁴ Tubi (with 20 million users per month)⁶⁵ and Viacom’s Pluto TV (16 million active users),⁶⁶ in addition to Amazon’s IMDB TV, Samsung TV Plus, Xumo, Twitch, Crackle, Facebook Watch, ET Live, Snapchat Discover and sports-focused AVODs like CBS Sports HQ.⁶⁷ By May 2020, 47 percent of U.S. consumers reported using at least one ad-supported video streaming service.⁶⁸

In a recent Video Competition Report, the FCC acknowledged the vast reach of OVDs and other digital platforms made possible by the variety of devices through which consumers can access online video, including “via multiple Internet-enabled devices, including computers, smartphones, tablets, gaming consoles, television sets, and other equipment.”⁶⁹ The Leichtman Research Group found in 2018 that 74 percent of U.S. television households had at least one TV set connected to the internet via a smart TV or other device (e.g., Roku, Apple TV, Chromecast) and that devices (e.g., smartphones, computers, iPads, tablets, or video-capable eReaders) that can be used for watching video are ubiquitous, with 98 percent of all households having at least one and with an average of about six per household.⁷⁰ More recently, in comparing the reach of various platforms,

⁶² Seth Shafer, “Hulu Viewing Soars Despite Intensifying OTT Competition,” S&P Global (September 25, 2019) (“Hulu has seen its total U.S. unique monthly viewer total march steadily toward the 100 million mark in recent quarters, with its average of 93.2 million monthly viewers in the second quarter of 2019 rising by 44.4% versus the prior-year quarter.”); Todd Spangler, “Hulu Says 70% of Its 82 Million Viewers Are on Ad-Supported Plan,” *Variety* (May 29, 2019) (available at <https://variety.com/2019/digital/news/hulu-ad-supported-subscribers-70-percent-1203227954/>) (noting that as of mid-2019, 70 percent of Hulu viewers accessed content through an ad-supported membership plan).

⁶³ Patience Haggin, “Roku Expects to Sustain Robust Revenue Growth,” *The Wall Street Journal* (February 13, 2020) (available at <https://www.wsj.com/articles/roku-expects-to-sustain-robust-revenue-growth-11581645214>) (“Roku is the market leader among connected-TV devices in the U.S...just under one in three smart TVs sold in the U.S. last year were Roku TVs. Roku reported 36.9 million active accounts at the end of the fourth quarter, a 36% increase from the prior year.”).

⁶⁴ Tim Peterson, “WTF is FAST?” *Digiday* (August 6, 2019) (hereafter *Digiday WTF is Fast*) (available at <https://digiday.com/media/wtf-is-fast/>).

⁶⁵ *Digiday WTF is Fast*. In March 2020, Fox Corp. announced its intention to acquire Tubi for \$490 million. See Joe Flint, “Fox Corp. to Buy Streaming Service Tubi,” *The Wall Street Journal* (March 17, 2020) (available at <https://www.wsj.com/articles/fox-corp-to-buy-streaming-service-tubi-11584479530>).

⁶⁶ *Digiday WTF is Fast*.

⁶⁷ Lillian Rizzo, Joe Flint and Patience Haggin, “Fox, Comcast Pursue Takeovers of Ad-Supported Video Services,” *The Wall Street Journal* (February 21, 2020) (available at <https://www.wsj.com/articles/nbcuniversal-in-talks-to-acquire-streaming-service-vudu-from-walmart-11582320612>) (noting that “Entertainment giants increasingly look to give consumers free or low-cost alternatives to premium subscription streaming services... Fox has expressed interest in acquiring Tubi... and Comcast’s NBCUniversal is in advanced talks to acquire Vudu from retail giant Walmart. Vudu allows consumers to buy or rent movies or shows and in 2016, launched a free, ad-supported service that includes thousands of movies and TV shows.”).

⁶⁸ Kevin Westcott, et al, *Digital Media Trends Survey 14th ed.* (Deloitte, 2020).

⁶⁹ *FCC 18th Video Competition Report* at ¶128.

⁷⁰ Leichtman Research Group, “74% of U.S. TV Households Have at Least One Connected TV Device” (June 8, 2018) (available at <https://www.leichtmanresearch.com/74-of-u-s-tv-households-have-at-least-one-connected-tv-device/>); Leichtman Research Group, *Research Notes 3Q 2018* (2018) at 1 (available at <https://www.leichtmanresearch.com/wp-content/uploads/2018/10/LRG-Research-Notes-3Q-2018.pdf>) (citing its *Emerging Video Services XII* study). As noted above, by 2020 the proportion of TV households with at least one connected device had increased to 80%. See n. 2 *infra*.

Nielsen reported that, in the third quarter of 2019, the weekly reach of apps/web on smartphones exceeded the weekly reach of live+time-shifted television.⁷¹ Not surprisingly, industry analysts have observed that as viewers' video consumption has migrated toward video content streamed by digital providers to Internet-connected TV screens and mobile devices, "advertisers are naturally following."⁷²

The widespread and growing adoption of ad-supported digital media in the U.S. is inconsistent with the Division's historical stance that broadcast television advertising is unique in its ability to "to reach a large percentage of households in a DMA."⁷³ In fact, digital advertising likely will be the only way to reach a large percentage of the population in a geographic area: TV viewing has dropped by 20 percent from 2010 to 2017, and nearly half of the Millennial and Gen X generations do not watch traditional television (whether broadcast or cable).⁷⁴

B. Digital Advertising is Increasingly Comparable to Television Advertising

Modern technology allows AVODs and other digital platforms to deliver ads with interactive and audience targeting features that meet or exceed the capabilities of broadcast television.⁷⁵ For example, Hulu and other AVODs offer "instream" video ads which accompany a video content stream and appear before (pre-roll), during (mid-roll) or after (post-roll) the video programming of interest.⁷⁶ Instream ads can last as little as 15 to 30 seconds or up to several minutes.⁷⁷ YouTube also offers advertisers the ability to purchase instream ad spots to accompany specific video content.⁷⁸ These digital ads embody the "combination of sight, sound and motion" that the Division historically has alleged makes broadcast television advertising "impactful and memorable and therefore effective" and different from digital ads.⁷⁹ That difference has eroded: ads shown on YouTube are often the exact same ads that are shown on broadcast television, and advertisers even

⁷¹ Nielsen, *The Nielsen Total Audience Report: Special Streaming Wars Edition* (February 2020) at 15 (estimating Q3 2019 Weekly Reach % of Users 18+ Among U.S. Population).

⁷² *Digiday Next Front of Streaming*.

⁷³ *Nexstar and Tribune Complaint* at ¶44.

⁷⁴ Luke Pensworth, "Why Digital Media is Killing TV Advertising," Hubspot (July 22, 2019) (available at <https://blog.hubspot.com/marketing/why-digital-media-is-killing-tv-advertising>).

⁷⁵ Peter Leitzinger, "Broadcasters Send Signals on IP Future with OTT, Next Gen TV at NAB Show," S&P Global Market Intelligence (October 23, 2019) ("Broadcasters have been eager to provide advertisers with impressions data, the type of targeting provided by digital media.").

⁷⁶ See *S&P State of Online Video*; Ali Choukeir and Seth Shafter, "State of US OTT: April 2019," S&P Global (April 25, 2019) at 6 (hereafter *S&P State of OTT*).

⁷⁷ *S&P State of OTT* at 6. See also Google Ads Help, "About Video Ad Formats" (hereafter *Google About Video Ad Formats*) (available at <https://support.google.com/google-ads/answer/2375464>) ("[s]kippable in-stream ads play before [pre-roll], during [mid-roll] or after other videos [post-roll]. After 5 seconds, the viewer has the option to skip the ad." Non-skippable instream ads, by contrast, "are 15 seconds (or shorter) and play before, during or after other videos. Viewers don't have the option to skip the ads.").

⁷⁸ YouTube offers several different categories of "instream ads," primarily including skippable instream ads, non-skippable instream ads and masthead ads (which appear at the top of the YouTube homepage for up to 30 seconds, or at the top of the YouTube app on mobile devices). *Google About Video Ad Formats*.

⁷⁹ *Nexstar and Tribune Complaint* at ¶43.

have the option of only showing ads on YouTube when the viewer is watching YouTube on a television set.⁸⁰

Many digital platforms also offer “outstream” video ads, which “are not tied to a content video stream and may be inserted directly into social media news feeds, pause screens or hardware interfaces”⁸¹ (including “masthead” or “banner” ads, which appear to users at the top of the YouTube homepage, or at the top of the YouTube mobile app). Facebook offers both instream and outstream digital video advertising, with the latter often being utilized to place ads on individual Facebook users’ “news feeds.”⁸² These ads again offer the same combination of sight, sound and motion the Division previously found to be a distinguishing characteristic of broadcast television.⁸³ Because local advertisers are able to access video ads of similar ad quality to those on broadcast television, it is unlikely that local broadcasters can price discriminate, charging higher prices to advertisers who demand video ads. These ads are now readily available on digital platforms, not to mention cable television.

In addition to instream and outstream video advertising on YouTube, YouTube’s parent company, Alphabet Inc., sells advertising related to users’ search queries on both YouTube and the Google search engine.⁸⁴ As Google explains to advertisers, search-based digital advertising “display[s] your ads when people search for products or services like yours. Your ads can appear on Google

⁸⁰ Matt Binder, “YouTube Just Made TV Advertising More Affordable Than Ever,” Mashable (October 17, 2018) (available at <https://mashable.com/article/youtube-tv-advertising>).

⁸¹ *S&P State of OTT* at 6; AdGrasp, “YouTube Outstream Ads Explained: Everything You Need to Know about YouTube Outstream Ads” (May 20, 2018) (available at <https://adgrasp.com/youtube-outstream-ads-explained/>) (“Outstream ads are not served on YouTube but on Google Video Partners outside YouTube. Outstream ads begin playing without sound but any user can choose to turn sound on. Google argues that because outstream ads appear as ‘native content,’ they capture the attention of the audience.”); eMarketer, “Understanding Out-Stream Video Advertising,” (July 7, 2017) (available at <https://www.emarketer.com/Article/Understanding-Out-Stream-Video-Advertising/1016127>) (Outstream video is defined as “a form of digital advertising in which video units are served in nonvideo environments, including text articles, social media feeds and video games. The term ‘out-stream’ is meant to distinguish these ads from formats that run within a video stream [instream ads], such as pre-roll, mid-roll and post-roll.”).

⁸² Davey Alba, “Google and Facebook Still Reign Over Digital Advertising,” Wired (July 29, 2017) (hereafter *Wired Google and Facebook Reign Over Digital*) (available at <https://www.wired.com/story/google-facebook-online-ad-kings/>) (“For Facebook, the News Feed and video ads are the primary products[.]”); Leo Sun, “Facebook’s Video Ad Revenue Could Top \$10 Billion by 2020,” USA Today (October 20, 2018) (available at <https://www.app.com/story/money/markets/2018/10/20/facebook-video-ad-revenue-social-instagram-2020/38163937/>) (In addition to placing ads on its core social network, Facebook also “sprinkles video ads” across “Messenger, Instagram and the Audience Network, which feeds ads to its third-party apps and websites.”); *S&P State of Online Video* (S&P Global notes that “the rising popularity of outstream video ad units popularized by social media services such as Facebook, Instagram, Twitter, Snap and others” have caused advertisers to embrace the outstream model[.]”).

⁸³ The DOJ has acknowledged that “Digital video advertisements, on the other hand, do allow for a combination of sight, sound, and motion, and on this basis are more comparable to broadcast television spot advertising than other types of digital advertising[.]” *Nexstar and Tribune Complaint* at ¶43.

⁸⁴ *Wired Google and Facebook Reign Over Digital* (“Whenever you search for anything on Google, meanwhile, you’ll likely see an ad come up as the very first search result – that’s the ad Google sells to marketers and advertisers [.]”); S&P Global Market Intelligence, “US Digital Ad Revenues by Format, 1996-2029” (2019) (according to S&P Global, in 2018, total U.S. digital ad revenues attributable to “search” totaled \$45.3 billion, compared to \$15.4 billion for video advertising.).

Search and Maps and across our network of partner sites” including YouTube.⁸⁵ In a similar vein, Twitter offers advertisers the ability to “target[t] keywords in people’s Tweets,” and “reach the right audience by targeting based on interests, geography, gender, device or users similar to your followers.”⁸⁶

Digital ads may also go a step beyond broadcast television by engaging with viewers *interactively*.⁸⁷ Examples include digital ads for automotive dealers that allow the viewer to explore the inside of a particular car on his or her smart phone⁸⁸ and ads on Hulu that offer viewers the opportunity to respond to promotional offers in real time.⁸⁹ As PwC notes in its 2019 *Internet Advertising Revenue Report*, interactive ads are expected to grow in importance with the deployment of next-generation 5G mobile networks.⁹⁰

Digital media also offer advertisers the ability to “target” customers. In addition to being able to tailor ads to customers in a given geographic area like a DMA (as with local broadcast spot advertising), many digital platforms allow advertisers to target ads across a wide range of additional metrics, often specific to individual customers.⁹¹ For example, YouTube’s video advertising service emphasizes that through utilizing the “wide variety of targeting methods”⁹² it makes available, “including demographic groups, interests, placements, and remarketing lists,”⁹³ advertisers can “reach specific or niche audiences based on who they are, what they’re interested in, and what content they’re viewing.”⁹⁴ To the extent that local broadcasters have been able to charge supracompetitive rates to local advertisers who advertise on broadcast television in order to target local populations, this ability has likely eroded as the ability to target digital ads has increased.

⁸⁵ Google Ads, “How It Works” (available at <https://ads.google.com/home/how-it-works/>).

⁸⁶ Twitter Ads, “Advertise on Twitter” (available at <https://ads.twitter.com/login>).

⁸⁷ Brian Steinberg, “Hulu Adds Another Interactive Ad: This One Lets You Get Offers Via Email,” *Variety* (February 19, 2019) (hereafter *Variety Hulu Adds Interactive Ad*) (available at <https://variety.com/2019/digital/news/hulu-interactive-advertising-email-sleep-number-1203142403/>) (noting that Hulu “continue[s] to train the audience that spots are going to be interactive.”).

⁸⁸ SpotX, *Auto Advertising: How Digital Video Is Driving the Industry* (2018) at 14 (hereafter *SpotX Auto Advertising*) (available at <https://www.spotx.tv/resource/white-paper-auto-advertising-how-digital-video-is-driving-the-industry/>) (“Engaging, high-definition video that lets users truly explore the car of their dreams can be a major factor in their decision process. By making it easy for consumers to complete a good portion of their research through the advertiser’s own websites or interactive ads [auto dealers] can begin building rapport that can translate to a purchase decision.”).

⁸⁹ *Variety Hulu Adds Interactive Ad* (“A commercial from Sleep Number, the manufacturer of the bed with an adjustable mattress, that has run on Hulu for the past several weeks allows viewers to request a promotional offer from the advertisers be sent to the email that is associated with the subscriber’s Hulu account.”).

⁹⁰ *PwC Advertising Report* at 8.

⁹¹ *NYT Traditional TV in Trouble* (“Companies love digital advertising because it gives them the ability to target ads based on their own lists of customers” and “profiles like ‘first-time car buyers’ or ‘people who like foreign travel.’”); Hulu, “Local Advertising” (available at <https://www.hulu.com/advertising/ads-on-hulu/locals/>) (hereafter *Hulu Local Ads*) (Hulu, for instance, emphasizes that video ads on its platform can be “as broad or specific” as local advertisers require, “from the state to the zip code level.”)

⁹² YouTube Help Center, “About Targeting for Your Video Campaigns” (available at <https://support.google.com/youtube/answer/2454017?hl=en>).

⁹³ *Ibid.*

⁹⁴ *Ibid.*

Digital media’s unique ability to both “target” and subsequently “track” customers is especially valuable to advertisers that have historically favored local broadcast television ads, like auto manufacturers and dealers. In a recent report on automotive advertising, SpotX notes that digital advertising, due to its advanced digital targeting and measurement capabilities, is “tailor-made for the various tiers within the automotive industry, providing each one with capabilities that aren’t easily matched by any other medium.”⁹⁵ Due in large part to digital media’s targeting and tracking capabilities, a 2018 report by Borrell Associates predicts that new car advertising by auto dealers on broadcast TV will decline 54 percent by 2023 while digital advertising will increase by 42 percent.⁹⁶

In contrast to ads placed on television,⁹⁷ digital media often enable advertisers to collect information about the extent to which customers engage with their ads:

The beauty of digital advertising, at least to the brand managers who are ultimately tasked with determining ad budgets, is that it is all about numbers. They know exactly who saw the ad. Where they saw it. What they did next. Whether they eventually bought anything remotely like the product. On TV, they know the ad ran.⁹⁸

The net effect of interactivity is to increase the rate of return on digital advertising relative to broadcast television, ultimately making it more competitive overall.⁹⁹

C. Digital Inventory is Growing

The growth in digital adoption and audiences means that digital platforms increasingly have the capacity and inventory to absorb demand. As shown in Figure 5, total U.S. digital video advertising revenue (including instream and outstream advertising but excluding banner overlay ads and revenue from direct sponsorship of video content and search) has grown at a compound annual

⁹⁵ *SpotX Auto Advertising* at 17.

⁹⁶ *NAB Workshop Comments* at 52 (citing Borrell Associates, *2018 Outlook: Automotive Advertising Takes a Sharp Turn* (October 9, 2018) (available at <https://www.borrellassociates.com/industry-papers/papers/2018-auto-report-oct-detail>)).

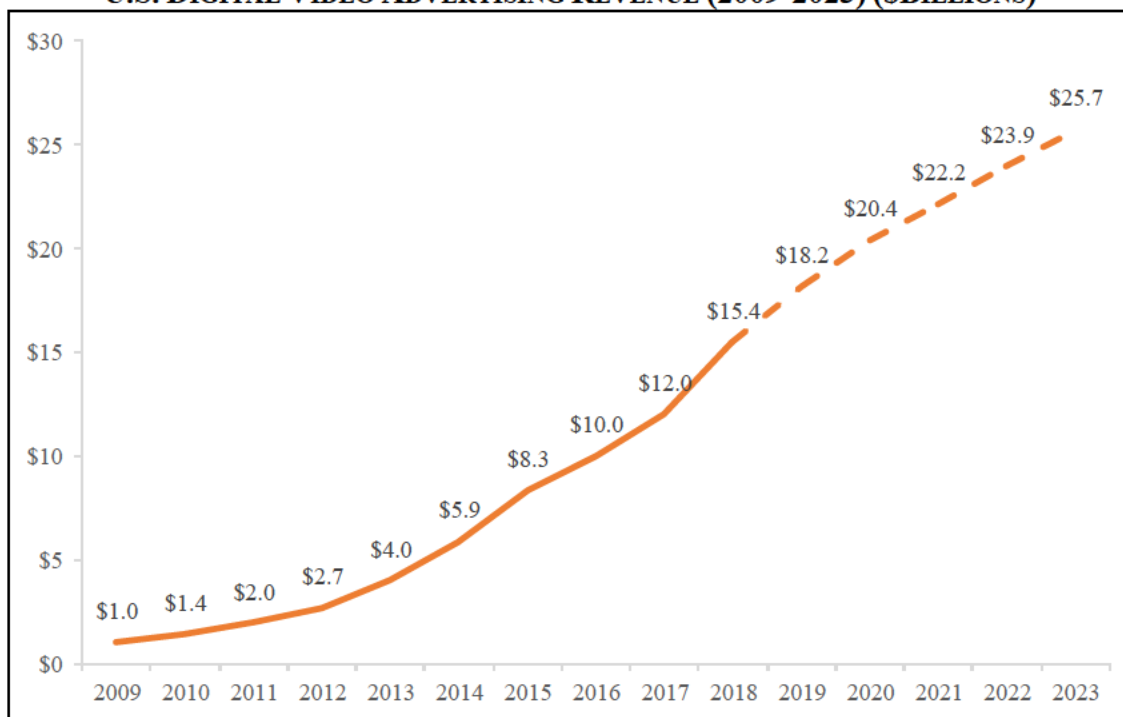
⁹⁷ *SpotX Auto Advertising* at 13 (“Digital has always offered the ability to track a variety of performance metrics more easily than traditional marketing mediums. But, even that tracking has evolved over the years, allowing advertisers to gain more insight into how a digital ad can help push consumers to take action.”).

⁹⁸ Alan Wolk, “As Television Gets More Digital, TV Advertising Needs to Follow Suit,” *Forbes* (March 1, 2018) (available at <https://www.forbes.com/sites/alanwolk/2018/03/01/as-television-gets-more-digital-tv-advertising-needs-to-follow-suit/#fbac0662c50e>).

⁹⁹ Moody’s, “U.S Broadcast Television Industry Outlook Is Stable, But Weak” (April 30, 2018) (available at https://www.moody.com/research/Moodys-US-broadcast-television-industry-outlook-is-stable-but-weak--PR_383045) (noting that the “very advanced programmatic advertising systems” employed by Facebook and Google “can more effectively target customers to produce higher returns on marketing spend.”); *DOJ Workshop Transcript* at 21 (“[D]igital advertising has numerous advantages. There are strong targeting capabilities that yield higher CPMs. It’s cheaper to buy.”)

growth rate of 35.5 percent since 2009, from just \$1 billion to over \$15 billion in 2018, and S&P Global forecasts revenues will increase to nearly \$26 billion by 2023.¹⁰⁰

**FIGURE 5:
U.S. DIGITAL VIDEO ADVERTISING REVENUE (2009-2023) (\$BILLIONS)**



Sources: S&P Global Market Intelligence, “U.S. Ad-Supported Video Trends” (2019); S&P Global Market Intelligence, “U.S. Ad-Supported Video Trends” (2018). Note: Data for 2019 and onwards are projected.

One signal that digital platforms have available inventory is that platforms like Facebook, Google and Hulu actively market that inventory to advertisers, including local advertisers.¹⁰¹ During the DOJ’s May 2019 Competition in Television and Digital Advertising workshop, Gray Television Inc.’s Pat Laplatney cited digital advertising’s “numerous advantages” and also observed that “increasingly, the big guys are setting up local sales capability.”¹⁰² For example, in 2018, YouTube expanded its “YouTube Director Onsite” service (which facilitates the development and placement of video ads on YouTube by local/small business) to over 170 U.S. cities.¹⁰³ As shown in Figure 6, between 2011 and 2018, YouTube’s annual revenue from instream video advertising increased from \$733 million to over \$8.8 billion (an increase of approximately 1,100 percent).

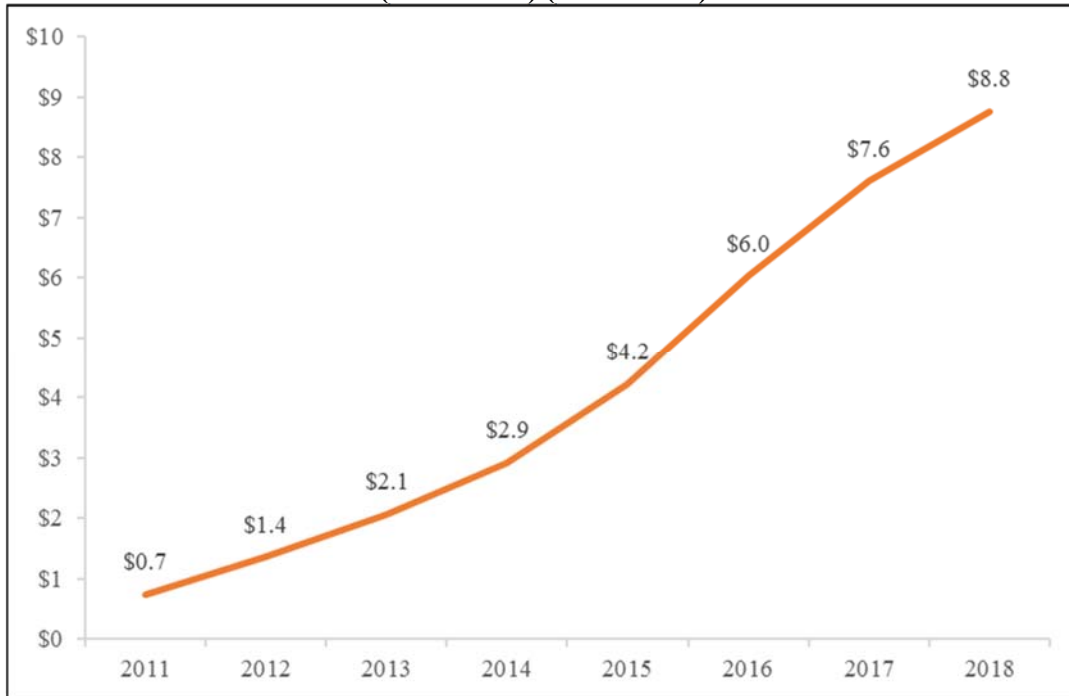
¹⁰⁰ S&P Global Market Intelligence, “U.S. Ad-Supported Video Trends” (2019); S&P Global Market Intelligence, “U.S. Ad-Supported Video Trends” (2018).

¹⁰¹ Facebook for Business, “Promote Your Local Business” (available at <https://www.facebook.com/business/goals/promote-local-business>); Sarah Perez, “Get Ready to Start Seeing More Local Ads on YouTube,” Techcrunch (March 20, 2018) (available at <https://techcrunch.com/2018/03/20/get-ready-to-start-seeing-more-local-ads-on-youtube/>); *Hulu Local Ads*.

¹⁰² DOJ Workshop Transcript at 22.

¹⁰³ Nicky Rettke, “YouTube Director Onsite Helps Small Businesses Make Video Ads,” Google (March 20, 2018) (available at <https://www.blog.google/topics/small-business/youtube-director-onsite-helps-small-businesses-make-video-ads/>).

**FIGURE 6:
YOUTUBE U.S. INSTREAM VIDEO ADVERTISING REVENUES
(2011-2018) (\$BILLIONS)**



Source: S&P Global Market Intelligence, “U.S. Ad-Supported Video Trends” (2019). Notes: [1] Instream video ad revenues include pre-roll, mid-roll, post-roll and related formats shown within a video stream but do not include any revenues from banner overlay ads, direct sponsorship of video content or video ads placed on pause screens or menu screens. [2] Total also includes YouTube’s share of ad revenues generated by its virtual multichannel services.

Similarly, between 2011 and 2018, Hulu’s annual instream advertising revenue more than tripled, growing from \$331 million to \$1.4 billion.¹⁰⁴

D. Digital Platforms Have Captured an Increasing Share of Local Advertising Spend from Local Broadcasters

OVDs and digital platforms have demonstrated the ability to reach local broadcast TV audiences and deliver advertising that meets or exceeds the quality of local broadcast television spot ads. As a result, advertisers have increasingly turned to digital platforms to deliver local advertising. Advertisers that traditionally have relied upon local broadcast television spots to deliver ads to

¹⁰⁴ S&P Global Market Intelligence, “U.S. Ad-Supported Video Trends” (2019). Preliminary evidence suggests that the growth in AVOD advertising inventory has been significantly accelerated by “stay-at-home” activity associated with the coronavirus epidemic. See e.g., Karlene Lukovitz, “Amid the Crisis, Video Ad Inventory Growing, Overall Digital Spend Holding Its Own,” VideoInsider (March 24, 2020) (available at <https://www.mediapost.com/publications/article/348934/amid-the-crisis-video-ad-inventory-growing-overa.html>).

potential customers, like automotive dealers¹⁰⁵ and political candidates,¹⁰⁶ have shifted significant portions of their advertising budgets to digital outlets.¹⁰⁷ In a 2019 study, Borrell Associates reported that Facebook has become the most popular marketing channel for local advertisers.¹⁰⁸ Major content providers, like NBCUniversal – which previously used separate tools to transact linear TV and digital advertising – now offer advertisers a single platform to coordinate ad campaigns across traditional and digital platforms simultaneously.¹⁰⁹ This direct substitution between local broadcast television advertising and digital advertising suggests that these two types of advertising are in the same product market.

¹⁰⁵ *SpotX Auto Advertising* at 14; Millie Beetham, “2019 Digital Marketing Trends for Auto Dealers,” Foureyes (January 3, 2019) (available at <https://foureyes.io/learn/2019-digital-marketing-trends-for-auto-dealers>) (“The best thing about digital for [car] dealerships? Ultra-specific targeting and lower CPCs – spending any money on traditional ads will be questionable at best in 2019. What’s more? Digital media are effectively turning traditional brand awareness strategies on their heads. Platforms like Facebook and YouTube allow dealers to serve the right content and track all the way to conversion. This isn’t the first time we’ve talked up the marketing opportunity for auto dealers on YouTube.”).

¹⁰⁶ Justin Nielson, “2019 Outlook: Challenges, Opportunities Facing US TV, Radio Stations,” SNL Kagan (January 31, 2019); Tony Romm, “Political Ads Are Flooding Hulu, Roku and Other Streaming Services, Revealing Loopholes in Federal Election Laws,” *The Washington Post* (February 20, 2020) (available at <https://www.washingtonpost.com/technology/2020/02/20/hulu-roku-political-ads-streaming/>) (“Politicians have followed people online, and over the past year, their ads have appeared on popular platforms such as Roku, the maker of hardware and software that powers Internet-connected TVs, and lesser-known options like Tubi, which offers ad-supported movie streaming... these video portals allow political campaigns and their allies to target their messages at specific categories of viewers. A political candidate or group might create an ad buy calibrated to voters based on their geographic area, age, gender or likely socioeconomic status. The ads can be run on an individual streaming service or purchased through a third party to reach an audience that spans multiple streaming sites.”). On a single day – June 4, 2020 – the Biden presidential campaign spent \$1.6 million on Facebook ads, and spent about \$5 million total on Facebook ads in just a few days in early June, as well as spending heavily on Google (more than \$1 million in seven days) and other digital platforms. Shane Goldmacher, “Biden Pours Millions Into Facebook Ads, Blowing Past Trump’s Record,” *New York Times* (June 8, 2020) (available at <https://www.nytimes.com/2020/06/08/us/politics/biden-trump-facebook-ads.html>).

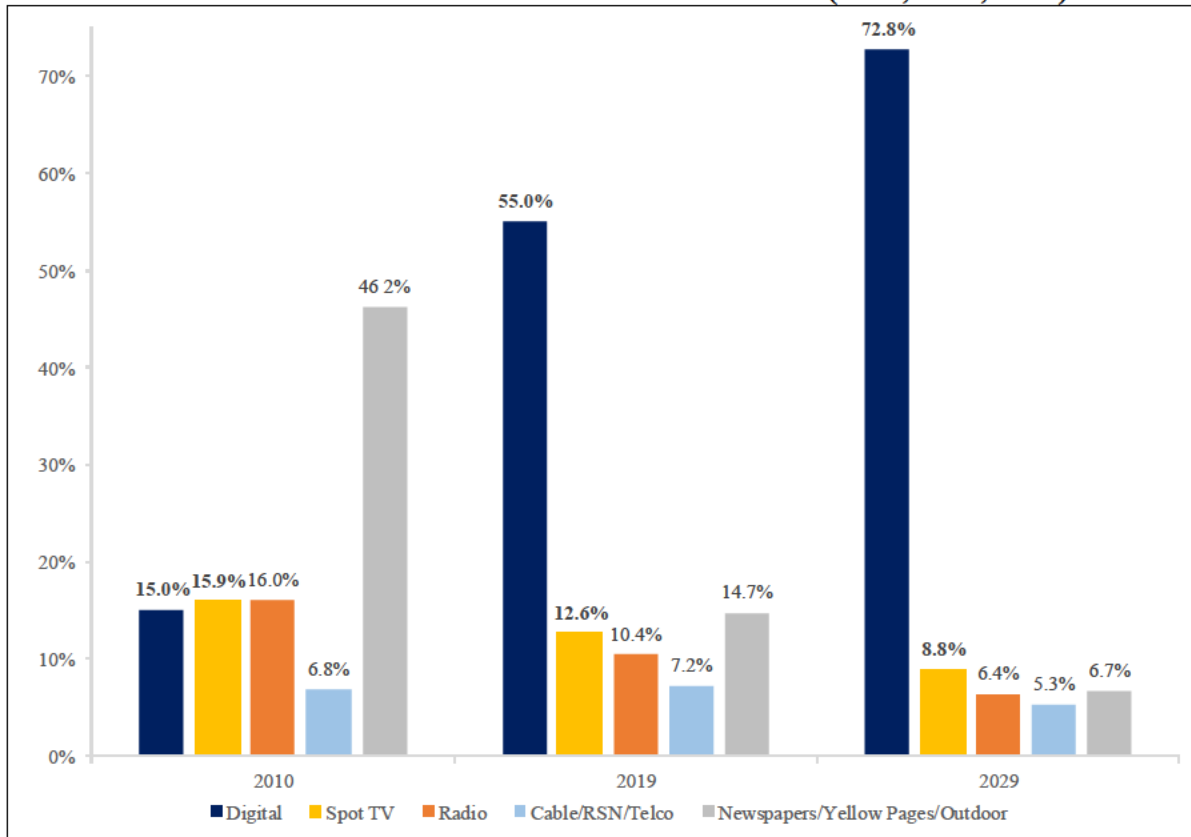
¹⁰⁷ In its June 2019 comments to the DOJ, the National Association of Broadcasters listed several examples of local advertisers which had substituted significant portions of their advertising purchases away from broadcast television spot ads and toward digital platforms, including: a large law firm that shifted approximately \$500,000 away from TV advertising and toward its own YouTube Channel, a local sandwich franchise that moved almost half its advertising spend to digital, a car dealer that now spends 90 percent of its local advertising money on digital – including search, targeting, geofencing and automobile aggregator sales – and a local hospital that moved all of its local ad spend to digital, among other examples. *NAB Workshop Comments* at 10 (citing Meredith Corporation, *In the Matter of 2018 Quadrennial Review, Comments of Meredith Corporation’s Local Media Group 2018 Quadrennial Review*, NPRM, Federal Communications Commission, MB Docket No. 18-349 (April 29, 2019) at 2). Another broadcaster at the DOJ Workshop explained in detail how an auto dealer advertiser in 2005 limited its advertising predominantly to local broadcast television and, to a lesser extent, cable but now divides its advertising among digital, cable networks/entities, an OTT provider, a broadcast network app and local broadcast television stations. See *NAB Workshop Comments* at 9, citing Gray Television’s DOJ Workshop Presentation at Slides 6, 9, 11 (stating that as a result of this greater ad market competition, the auto dealer’s advertising on Gray’s top-rated local television station had declined from \$528,000 in 2012 to \$178,000 in 2018).

¹⁰⁸ Borrell Associates, *Benchmarking Local Media’s Digital Revenues: Executive Summary* (2019) at 4 (available at <https://www.borrellassociates.com/shop/summaries/benchmarking-local-media-s-digital-revenue10843-detail>).

¹⁰⁹ Jason Lynch, “NBCUniversal Solidifies One Platform Offering Ahead of Upfront,” *Adweek* (February 25, 2020) (available at <https://www.adweek.com/tv-video/nbcuniversal-solidifies-one-platform-offering-ahead-of-upfront/>).

The shift of local advertising dollars from traditional media (including broadcast television) to digital platforms is illustrated in Figure 7, which shows the share of total local advertising revenue captured by different outlets in 2010, 2019 and 2029 (projected).

**FIGURE 7:
LOCAL ADVERTISING MARKET SHARES BY OUTLET (2010, 2019, 2029)**



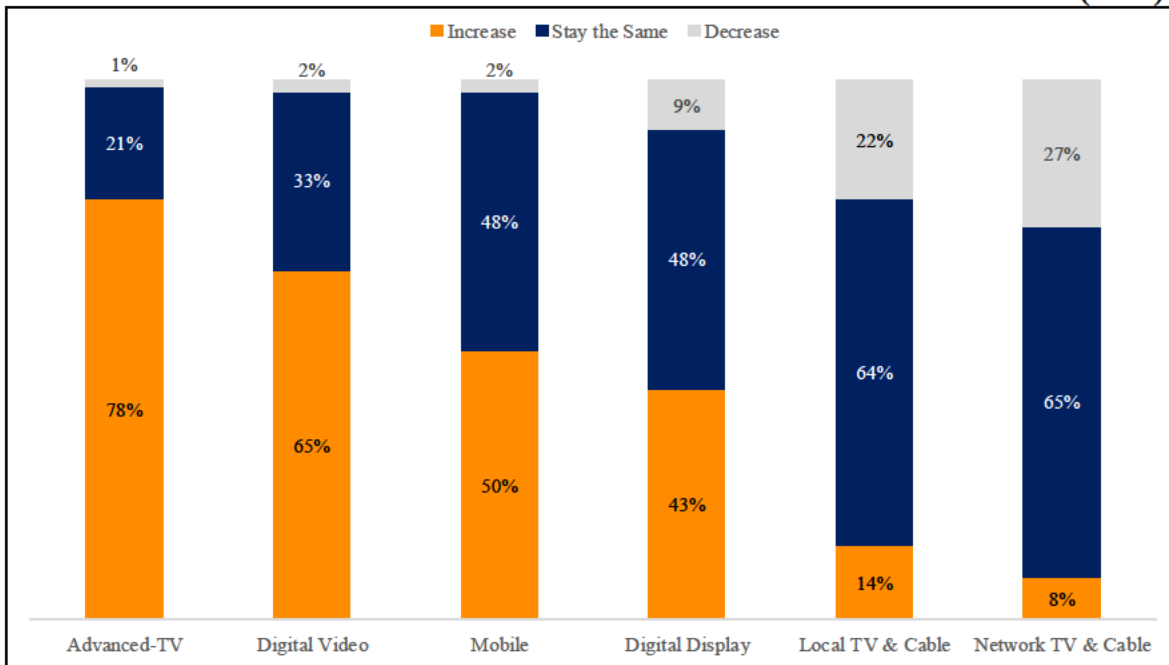
Sources: S&P Global Market Intelligence, “US Advertising Revenue by Sector 2019-2029” (2020); S&P Global Market Intelligence, “US Advertising Revenue by Sector 2007-2016” (2017). Note: Data for 2020 and onwards are projected.

Between 2010 and 2019, the share of local advertising spend accounted for by digital media (Internet and mobile advertising) increased by 40 percentage points (from 15 percent to 55 percent), while broadcast spot television’s share declined from 16 percent to 13 percent. S&P Global projects that digital media will continue to capture an increasing share of local advertising in the future, in part at the expense of local broadcasters. Specifically, digital media’s share of local advertising revenue is projected to grow from 55 percent in 2019 to almost 73 percent by 2029, while broadcasters’ share is expected to decline from 13 percent to less than nine percent over the same period. Furthermore, according to BIA Kelsey’s 2019 U.S. Local Advertising Forecast, local broadcast television advertising revenue is projected to grow by just 0.6 percent annually from 2019 through 2023, while local online video advertising and local mobile video advertising are projected to grow by 16.6 percent and 10.5 percent, respectively.¹¹⁰

¹¹⁰ BIA Kelsey, 2019 U.S. Local Advertising Forecast: Q1 Client Briefing (January 2019) at 13 (available at <http://www.biakelsey.com/wp-content/uploads/2019/01/BIA-Briefing-Q1-2019.pdf>).

A 2019 survey by Comcast/Freewheel of over 430 local media planning and ad buying agencies provides further evidence of the shift from traditional television to digital platforms.¹¹¹ Figure 8 reports survey responses to the question, “How do you expect your spend on each of the following media types will change in the next 12 months?”

FIGURE 8:
ANTICIPATED ANNUAL CHANGE IN LOCAL AD AGENCIES’ SPEND BY PLATFORM (2019)



Source: *Freewheel Advertisers Survey at 3.*

As the figure shows, 78 percent of agencies expected their ad spend via Advanced TV¹¹² to increase, 65 percent expected their spend via digital video to increase, 50 percent expected their mobile ad spend to increase and 43 percent anticipated increases in digital display ad spend. On the other hand, only 14 percent of respondents anticipated increases in local TV and cable ad spend; in fact, 22 percent of agencies expected local TV and cable ad spend to decline. If local broadcast television advertising and digital advertising were in distinct and separate product markets, we would expect to see little or no relationship between ad spend on local broadcast television and digital media. Instead, we see a negative correlation between spending on these two media, which is consistent with substitution between the two types of advertising and a relevant product market incorporating both types of advertising.¹¹³

¹¹¹ Freewheel/Comcast, *Freewheel Advertisers 2H2019 Agency Survey: The Growth of Advanced Advertising Solutions Among Local and Regional Buyers* (2019) at 3 (hereafter *Freewheel Advertisers Survey*) (available at https://www.freewheel.com/wp-content/uploads/2019/10/FreeWheel_Advertisers_2H2019_Agency_Survey.pdf).

¹¹² *Freewheel Advertisers Survey at 2* (“Advanced-TV,” as defined in the Freewheel/Comcast report, includes STB, VOD, OTT, Addressable TV, Advanced Linear or Streaming FEPs.).

¹¹³ Advertiser reactions to the coronavirus pandemic provide further support for substitution between traditional television and digital ad spending. Companies such as Chipotle and General Mills have shifted dollars away from

To summarize, the information presented above strongly suggests that the distinctions the Division has pointed to in the past as differentiating local television from digital platforms have eroded, and that digital platforms now compete directly with local television broadcasters for local advertising dollars. Although the broader trends show that local advertisers can place ads both on local broadcast television and on digital platforms, to date there has been little empirical evidence that advertising on digital platforms has had an effect on the price of local broadcast television advertising prices. We address this gap in the next section by analyzing whether and by how much the growth in digital media has affected the historical relationship between local broadcast television advertising prices and local broadcast television concentration.

IV. Regression Methodology and Results

As discussed above, one main purpose of antitrust market definition is to facilitate the assessment of competitive effects by allowing for the calculation of market shares and market concentration statistics. Under this approach, market definition and the resulting calculation of market shares and concentration would be an “indirect means of determining the presence of market power or the likelihood that it will be exercised.”¹¹⁴

This study uses temporal and geographic variation in broadcast television market concentration and average DMA-level broadcast advertising prices to assess whether local broadcast television advertising constitutes a separate market. Our approach is based on the following conceptual framework: If broadcast television advertising is a distinct relevant market, then changes in local market concentration would affect local broadcast television advertising prices. In more concentrated markets, prices would be higher; in less concentrated markets, prices would be lower. Suppose, however, there were competing alternatives to local broadcast television advertising. If this were the case, an increase in local market concentration may have little or no effect on prices. For example, a merger of two local television broadcasters may lead to an increase in local broadcast television market concentration, but it might not lead to higher prices if digital advertising was a competitive constraint before and after the merger.

To test whether local broadcast television advertising constitutes a distinct relevant market, we first estimate the relationship between price and concentration. We then see whether this relationship has changed over time. If digital advertising is a competitive alternative to local broadcast television advertising, then we would expect to see a weakening of the price-concentration relationship over time as digital advertising has become more prevalent. As we explain below, we find a positive relationship between price and concentration in the period 2009 to 2011. But this relationship becomes weaker in the period 2012 to 2015, and it reverses in the period 2016 to 2018. This finding is consistent with an increasing ability of local advertisers to

television and into digital video, expecting that “the pandemic will accelerate the shift of TV ad dollars to other marketing channels including streaming-video services and tech giants such as Alphabet Inc.’s Google and Facebook Inc.” See Suzanne Vranica, “From PepsiCo to GM, Big Advertisers Set to Cancel Commitments to TV Networks,” *The Wall Street Journal* (May 12, 2020) (available at <https://www.wsj.com/articles/from-pepsico-to-gm-big-advertisers-set-to-cancel-commitments-to-tv-networks-11589298017>).

¹¹⁴ See, e.g., J. Thomas Rosch, *The Past and Future of Direct Effects Evidence*, Remarks of J. Thomas Rosch, Commissioner, Federal Trade Commission, ABA Section of Antitrust Law’s 59th Spring Meeting (March 30, 2011) at 2.

substitute between broadcast television advertising and all other forms of advertising, including cable TV as well as digital media.

We further test whether the change in the relationship between price and concentration is related to the growth of digital media. Here, our hypothesis is as follows. If advertising on digital platforms is a competitive constraint on the price of local broadcast television advertising, then we should see that the relationship between price and concentration is more positive in markets where digital media adoption is lower and less positive or insignificant in markets where digital media adoption is higher. We can test this empirically because there is significant variation in digital media adoption across time and markets. As we explain below, we find that the relationship between market concentration and price is, in fact, weaker in markets where the adoption of digital media is higher, which provides further support that advertising on digital platforms is a competitive constraint on local broadcast television prices.

Our results showing an erosion of the price-HHI relationship both over time and in the presence of increased digital adoption do not identify the specific reason why local advertisers now find other outlets to be effective substitutes for broadcast television advertising. It may be due to a convergence in ad quality or reach or an increase in the inventory of advertising on other media. Yet, they are consistent with the evidence described above that local advertisers increasingly see little distinction between broadcast television ads and ads on other media.

The first section below describes the methodology and data; the second section presents the results and discusses their economic implications.

A. Regression Methodology

The empirical analysis presented in this section uses linear regression to examine the price-concentration relationship for broadcast spot advertising in local media markets and how that relationship has been affected by the growth of digital media. The primary analysis involves the estimation of two models. The first model assesses the extent to which there is a relationship between concentration and price in the sale of local broadcast television advertising and, if so, how this relationship has changed over time. The second model examines the extent to which digital media acts as a substitute for broadcast spot advertising by analyzing how Facebook adoption affects the price-concentration relationship. The results from two additional models are also presented as robustness tests. The first robustness test uses the number of broadcast firms competing in a local market in place of HHI in the model estimating the relationship between market structure and price. The second robustness test replaces Facebook adoption with YouTube adoption in the model analyzing the interaction between digital adoption and broadcast concentration.¹¹⁵

¹¹⁵ In addition to the models and robustness checks reported here, we estimated a variety of different specifications using various proxies for digital media adoption and different functional forms. The results are broadly consistent with and supportive of the findings reported here.

1. Model Specifications

To assess changes in the relationship between market structure and prices of broadcast television advertising, we estimate a model where the dependent variable is the (logarithm of) DMA-level average price for local broadcast television advertising. Our measure of local broadcast television market concentration is the HHI, which we calculate using broadcast television station revenues at the DMA level.¹¹⁶

The model examines the relationship between HHI and price across three time periods: an “early period” from 2009 to 2011, a “middle period” from 2012 to 2015 and a “late period” from 2016 to 2018. As a robustness test, we also estimate the model replacing HHI with the number of broadcast firms competing in a DMA.

To examine directly the role of digital media in mitigating any potential relationship between structure and prices, we estimate a model where the dependent variable is the (logarithm of) DMA-level average price for broadcast advertising. The primary independent variables of interest are HHI and a variable that captures the interaction of HHI and Facebook adoption. The interaction variable reveals whether and by how much the relationship between price and concentration is affected by the level of Facebook adoption in that DMA. We also present the results of specifications in which Facebook adoption is replaced with YouTube adoption. As noted above, Facebook and YouTube (operated by Google parent Alphabet) are two of the largest digital video advertising platforms, and thus the level of their adoption by consumers is a well-suited measure of the competitive impact of digital advertising.

All of the models are estimated controlling for other market factors that may affect the price of advertising, such as (the logarithm of) total per capita income, (the logarithm of) population, various indicator variables that capture the demographic composition of residents in the DMA and the proportion of the population between the ages of 18 and 44. Each model is also estimated using the fixed-effects “within” estimator to eliminate the potential confounding effects of non-time varying characteristics associated with the individual DMAs in the sample.¹¹⁷ Standard errors are clustered by DMA and the estimates are weighted by the 2018 population size of each DMA. All regressions also include controls for year and quarter fixed effects.

2. Data

The data used in this study come from three sources. First, we obtained DMA-level data on average broadcast television advertising prices from SQAD.¹¹⁸ Second, we obtained data on station ownership changes, station and firm-level revenue, and DMA-level economic and demographic

¹¹⁶ Revenue is limited to broadcast television advertising and excludes other sources of revenue, including retransmission consent revenue.

¹¹⁷ See, e.g., Fumio Hayashi, *Econometrics*, 1st ed. (Princeton, NJ and Oxford, U.K.: Princeton University Press, 2000) at 323-336.

¹¹⁸ SQAD is a provider of media related research whose pricing data has been used widely in the prior economic literature quantifying the effects of changes in market structure on broadcast television advertising prices. See SQAD Advertising Research Analytics & Planning (available at <http://sqad.com/>).

data from BIA Kelsey.¹¹⁹ Third, we obtained data on Facebook and YouTube adoption from MRI-Simmons.¹²⁰ In total, we were able to collect data on broadcast television advertising prices, station revenues, and DMA-level demographic and digital media adoption for 208 DMAs from 2009 to 2018. A full list of the variables used in the analyses, the definitions of each variable, and the corresponding sources are presented in Table 2.

**TABLE 2:
VARIABLE DEFINITIONS AND SOURCES**

Variables	Definitions	Source
log(CPM)	The natural logarithm of the CPM (cost per thousand in prime time) for adults aged 18 to 49 in a given DMA and quarter.	SQAD
HHI	The Herfindahl-Hirschman Index calculated based on station advertising revenue in a given DMA and quarter.	BIA
Firms	The number of firms in a given DMA and quarter.	BIA
Facebook Adoption	The percentage of adults 18 and over who reported using Facebook in the last 30 days in a given DMA and year.	MRI-Simmons
Facebook Adoption × HHI	The Facebook adoption rate multiplied by the HHI in a given DMA and quarter.	BIA; MRI-Simmons
YouTube Adoption	The percentage of adults 18 and over who reported using YouTube in the last 30 days in a given DMA and year.	MRI-Simmons
YouTube Adoption × HHI	The YouTube adoption rate multiplied by the HHI in a given DMA and quarter.	BIA; MRI-Simmons
log(Total Personal Income per Capita)	The natural logarithm of the total personal income per capita in a given DMA and year.	BIA
log(Total Population)	The natural logarithm of the total population in a given DMA and year.	BIA
% Black Population	The percentage of the black population in a given DMA and year.	BIA
% Hispanic Population	The percentage of the Hispanic population in a given DMA and year.	BIA
% Population 18-44	The percentage of the population aged 18 to 44 in a given DMA and year.	BIA

To estimate the price-concentration relationship and to examine how it may have changed over time, we analyze a sample of 198 DMAs. These are the 208 DMAs for which we have data less than ten DMAs that, at some point between 2009 and 2018, were served by only one local television broadcaster.¹²¹ Thus, for our analysis, we analyze a dataset comprised of 7,920 DMA-quarter observations spanning 198 DMAs from 2009 to 2018. Table 3 presents summary statistics.

¹¹⁹ BIA provides research and consulting services for companies engaged in local advertising markets. See BIA Advisory Services (<http://www.biakelsey.com/>).

¹²⁰ MRI-Simmons is a market research firm that collects detailed data on consumer behavior through surveys. See MRI-Simmons, “About” (<https://www.mrisimmons.com/about/>).

¹²¹ The ten excluded markets are Alpena, MI; Harrisonburg, VA; Jonesboro, AR; Lafayette, IN; Mankato, MN; North Platte, NE; Parkersburg, WV; Presque Isle, ME; St. Joseph, MO and Zanesville, OH. These are the ten markets where, during at least one quarter of the sample period, the HHI was 10,000, which indicates that the DMA was served by a single local broadcast television station owner. Over time, the average HHI in these markets was 9,497, compared with the sample average of 3,264. Thus, the observations associated with these markets generally represent substantial outliers. We omitted these ten DMAs so that our estimates of the price-concentration relationship would not be affected by market changes that moved the market towards or away from having a single local broadcast television

**TABLE 3:
SUMMARY STATISTICS**

Variables	Number of Observations	Mean	Median	Standard Deviation	10th Percentile	90th Percentile
log(CPM)	7,920	4.0	3.9	0.5	3.4	4.6
HHI	7,920	3,264	2,884	1,286	2,119	5,039
Firms	7,920	6	5	3	3	10
Facebook Adoption	7,760	45.2%	51.7%	17.9%	13.9%	62.8%
Facebook Adoption × HHI	7,760	1,462	1,409	831	416	2,484
YouTube Adoption	7,760	37.4%	39.4%	11.2%	20.7%	50.7%
YouTube Adoption × HHI	7,760	1,194	1,122	561	590	1,889
log(Total Personal Income per Capita)	7,920	10.4	10.5	0.2	10.1	10.7
log(Total Population)	7,920	6.8	6.7	1.1	5.5	8.2
% Black Population	7,920	11.5%	6.7%	11.6%	1.3%	30.3%
% Hispanic Population	7,920	12.7%	6.1%	16.3%	2.1%	35.0%
% Population 18-44	7,920	35.4%	35.4%	2.5%	32.4%	38.4%

Sources: SQAD data; BIA data; MRI-Simmons data. Note: The number of observations does not match in all regressions because data on Facebook and YouTube adoption are not available for four markets.

Table 3 indicates that there is significant variation in the variables used in the regression analyses, particularly the market structure and digital media adoption variables that are of primary importance. The presence of significant variation in the variables of primary interest demonstrates that the sample provides a robust basis for testing the hypotheses outlined above. Note that changes in HHIs within DMAs are by definition driven either by changes in market structure (i.e., consolidation, entry, exit or divestiture) or by changes in revenues among existing firms. As shown in the Appendix, the changes in HHI, which permit identification of the regression models estimated here, primarily reflect changes in market structure.¹²²

B. Regression Results and Implications for Antitrust and Competition Policy Analysis

This section presents the results of our regression analyses and explains their economic significance.

1. The Price-Concentration Relationship Over Time

Table 4 presents the primary regression results and the results from the robustness tests.

station owner. In addition, while SQAD used to have historical pricing data for all 210 DMAs, due to a change in data collection methodology, historical data from SQAD is no longer available for the Juneau, AK and Glendive, MT DMAs.

¹²² The results presented here calculate HHIs based on the number of broadcast station owners in each DMA, and do not account for Joint Sales Agreements (JSAs) or similar arrangements among broadcast stations. However, as discussed in the Appendix, accounting for such agreements does not materially affect our results.

**TABLE 4:
PRIMARY REGRESSIONS RESULTS AND ROBUSTNESS TESTS**

Independent Variables	(1) log(CPM)	(2) log(CPM)	(3) log(CPM)	(4) log(CPM)
HHI	0.007**	0.011***		0.015***
HHI in Middle Period (2012-2015)	-0.005**			
HHI in Late Period (2016-2018)	-0.009***			
Facebook Adoption		1.393**		
Facebook Adoption × HHI		-0.021***		
Firms			-0.031**	
Firms in the Middle Period (2012-2015)			0.014***	
Firms in the Late Period (2016-2018)			0.023***	
YouTube Adoption				1.700***
YouTube Adoption × HHI				-0.036***
log(Total Personal Income per Capita)	0.537**	0.577**	0.496**	0.576**
log(Total Population)	0.048	0.065	0.107	-0.011
% Black Population	0.028	0.022	0.036*	0.024
% Hispanic Population	-0.004	-0.007	-0.003	-0.005
% Population 18-44	0.002	0.003	-0.000	0.002
Constant	-2.784	-3.384	-2.410	-3.010
Observations	7,920	7,760	7,920	7,760
Within R-squared	0.781	0.785	0.785	0.784
Number of DMAs	198	194	198	194
Year Fixed Effects	Yes	Yes	Yes	Yes
Quarter Fixed Effects	Yes	Yes	Yes	Yes
DMA Fixed Effects	Yes	Yes	Yes	Yes

*Sources: SQAD data; BIA data; MRI-Simmons data. Notes: [1] *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. [2] The number of observations does not match in all regressions because data on Facebook and YouTube adoption are not available in all DMA-quarters.*

The first column in Table 4 presents the results from the model quantifying the relationship between concentration and price over time. The variables representing the effect of HHI in the middle period and the late period are estimated as interactions between the HHI variable and an indicator variable for the time period. Thus, the coefficient on the standalone HHI variable represents the effect of HHI in the early period, and the coefficients on the middle period and late period interaction variables represent the *change* in the relationship between concentration and price relative to the early period.

To interpret the coefficients, consider the effect of a 100-point increase in HHI. In the early period, there is a positive and significant relationship between concentration and price, such that a 100-point increase in HHI is associated with a 0.7 percent increase in price.¹²³ In the middle period, there is a statistically significant attenuation of the relationship between concentration and price. In the late period, there is a further reduction in the price-concentration relationship. Table 5 shows

¹²³ In Table 4, HHI is measured in hundreds, i.e., an HHI of 3,000 is represented as 30. Facebook and YouTube adoption are measured from zero to one, i.e., a Facebook adoption of 50 percent is represented as 0.50.

the estimated net price effect of a 500-point, 1,000-point and 1,500-point increase in HHI in each time period based on the coefficients in column 1 above.¹²⁴

**TABLE 5:
NET PRICE EFFECT BY TIME PERIOD**

Period	HHI Coefficient	Net HHI Effect	Δ HHI	Estimated % Change in Price	Statistical Significance
Early (2009-2011)	0.007	0.007	500	3.5%	Significant
			1,000	7.0%	
			1,500	10.5%	
Middle (2012-2015)	-0.005	0.002	500	1.0%	Not Significant
			1,000	2.0%	
			1,500	3.0%	
Late (2016-2018)	-0.009	-0.002	500	-1.0%	Not Significant
			1,000	-2.0%	
			1,500	-3.0%	

Note: Price effects are significant if $p < 0.10$.

In Table 5, the first column represents the time period. The second column represents the HHI coefficient estimates from the HHI by time period regression. The third column represents the net price effect in each time period based on the regression coefficients. Because the HHI coefficients from the second column represent the change in HHI in the middle and late periods relative to the early period, the net price effect for the middle and late periods is the sum of the early period HHI coefficient and the coefficient on the HHI-middle/HHI-late period variables. Thus, the net HHI effect in the middle period of 0.002 is the sum of the early period HHI coefficient of 0.007 and the middle period HHI coefficient of -0.005. Likewise, the net HHI effect in the late period of -0.002 is the sum of the early period coefficient of 0.007 and the late period coefficient of -0.009. The fourth column represents the counterfactual changes in HHI modeled in the next columns. The fifth column represents the estimated change in price implied by the net HHI effect and the change in HHI indicated in the fourth column. The sixth column indicates whether the estimated price changes in the previous column are statistically significant.

¹²⁴ As noted above, the regression results presented here are weighted using the 2018 population size of each DMA. We use the weighted regression results as our primary estimates to give greater importance to larger advertising markets and so that the results are a more accurate reflection of the prices paid by the average advertiser. Consideration of weighted and non-weighted results is also a useful robustness test, and the results are similar using unweighted regression estimates, demonstrating that the results are not driven by weighting choices. To be precise, for the unweighted regression, the HHI variable is positive and significant in the early period, and the HHI interaction in the late period is negative and significant and subsumes the positive effect just as in the weighted regression. As in the weighted regression results, the coefficient on the HHI interaction for the middle period is negative and smaller in absolute magnitude than the effect in the late period, indicating a pattern of price effects decreasing over time, although for the unweighted estimate, the middle period HHI coefficient is not statistically significant. For the number of firms regression, the weighted and unweighted estimates are very similar in all respects. For the Facebook and YouTube adoption regressions, the coefficients on the HHI variables are positive and significant, and the coefficients on the interaction of HHI and adoption are negative and significant in both the weighted and unweighted regressions.

In the early period, there is a modest and statistically significant relationship between concentration and price. The coefficient estimate implies that a local broadcast television merger that increases the HHI by 500 points would be associated with a 3.5 percent price increase (holding aside the effects of other local market conditions) while a local broadcast television merger that increases the HHI by 1,500 points would be associated with a 10.5 percent price increase. In the middle period, due to the significant dissipation of the price-concentration relationship, the consequences of increased concentration are muted substantially. A 500-point increase in HHI is now associated with a 1.0 percent price increase, a 1,500-point increase in HHI is now associated with a 3.0 percent price increase, and these effects are statistically indistinguishable from a null hypothesis of no price effect. In the late period, the price-concentration relationship is fully reversed changing from positive to negative. A 500-point increase in HHI is associated with a 1.0 percent decrease in price, and a 1,500-point increase in HHI is associated with a 3.0 percent decrease in price. Again, however, these effects are statistically indistinguishable from a null hypothesis of no price effect.¹²⁵

2. The Effect of Digital Media Adoption on the Price-Concentration Relationship

To assess the effect of digital media adoption on the price-concentration relationship, we can return to the regressions shown in Table 4, and specifically, the second column, which presents the results from the model that quantifies the relationship between concentration, Facebook adoption and price. The coefficient on the standalone HHI variable is statistically significant and indicates that a 100-point increase in HHI is associated with a 1.1 percent price increase. However, due to the presence of the HHI-Facebook adoption interaction term, the technical interpretation of the standalone HHI coefficient is the effect of HHI on price in a DMA with no Facebook adoption, and thus, it is necessary to interpret this coefficient in conjunction with the interaction term to assess meaningfully the economic and statistical significance of the price-concentration relationship.¹²⁶ In contrast to the standalone HHI variable, the interaction between Facebook adoption and HHI is negative and significant, implying that Facebook adoption weakens the relationship between concentration and price.¹²⁷ To facilitate interpretation of how Facebook adoption affects the price-concentration relationship, Figure 9 shows the net impact of a 500-point

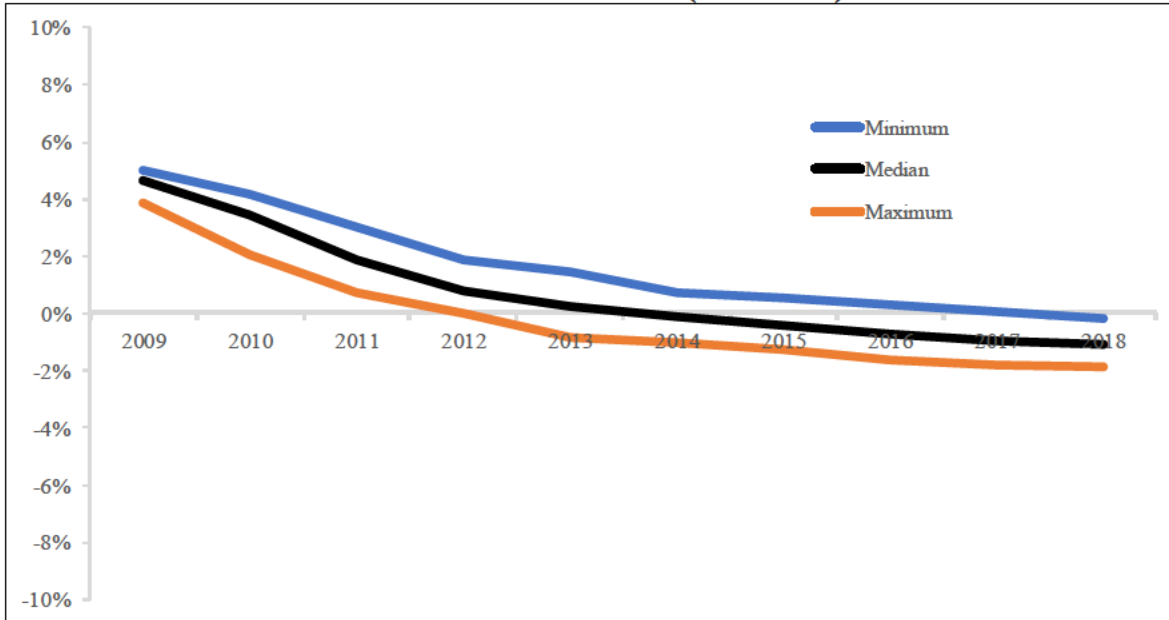
¹²⁵ We also estimated the model on the entire dataset of 208 DMAs (including those DMAs that, at some point between 2009 and 2018, were served by only one local television broadcaster) and found similar results. When the ten outlier DMAs are included in the sample, the coefficient estimates on the HHI interaction variable in the middle and late periods are negative and statistically significant, which show the erosion of the price-concentration relationship over time. The only notable difference between the estimates is that with the outliers included, the positive coefficient on the HHI variable in the early period is smaller and not statistically significant at the five percent level.

¹²⁶ In other words, both terms in the regression that include HHI must be added together to find the effect of HHI on price. For example, the effect of HHI on the natural log of price as shown in the second column of Table 4 would be $0.011 \times \text{HHI} - 0.021 \times \text{Facebook adoption} \times \text{HHI}$.

¹²⁷ The positive and significant coefficient on the standalone Facebook adoption variable implies that markets with higher levels of Facebook adoption have higher advertising prices. Our intuition is that this result may reflect an underlying relationship between Facebook adoption and the demand for local broadcast spot advertising due to, for instance, higher per capita incomes in areas with greater Facebook adoption. To test this hypothesis, we added region-year fixed effects to the model, using regions as defined by the Census Bureau. This rendered the coefficient on the stand-alone Facebook variable insignificant, while the coefficient on the standalone HHI variable remained positive and significant and the coefficient on the interaction of HHI and Facebook adoption remained negative and significant.

increase in HHI on price at the minimum, median and maximum level of Facebook adoption across DMAs in each year from 2009 to 2018.

**FIGURE 9:
EFFECT OF A 500-POINT INCREASE IN HHI ON PRICE
BY FACEBOOK ADOPTION (2009-2018)**



Sources: SQAD data; BIA data; MRI-Simmons data.

As shown in Figure 9, by 2018, due to the high level of Facebook adoption across all markets (ranging from 54 percent to 70 percent) the net effect of a 500-point increase in HHI is negative across all DMAs, although none of the negative price impacts are significantly different from zero.

The third column in Table 4 presents the results from the first robustness test, in which the HHI variables from column one are replaced with variables representing the number of broadcast television firms competing in the DMA. In the early period, a one firm reduction in the number of television broadcasters is associated with a statistically significant increase in price of 3.1 percent. As with the HHI by time period regression, in the middle period, there is a statistically significant attenuation of the relationship between the number of firms and price. The net impact of a one firm reduction in the number of firms in the middle period is 1.7 percent, and this effect is not significantly different from zero. In the late period, the relationship weakens further, and the net impact of a one firm reduction in the number of television broadcasters is 0.8 percent, an effect which is also not significantly different from zero.

The fourth column presents the results from the second robustness test where Facebook adoption is replaced with YouTube adoption. The coefficient on the HHI variable is statistically significant and indicates that in a DMA with no YouTube adoption, a 100-point increase in HHI is associated with a 1.5 percent price increase. As with the Facebook adoption regression, the interaction between YouTube adoption and price is negative and significant, indicating that YouTube adoption weakens the relationship between concentration and price. At 2018 levels of YouTube adoption (ranging from 37 percent to 60 percent), the net effect of a 500-point increase in HHI is

negative across almost all DMAs, and none of the price impacts are significantly different from zero.¹²⁸

3. Implications for Antitrust and Competition Policy Analysis

As explained in the Merger Guidelines, the purpose of market definition is to allow “the Agencies to identify market participants and measure market shares and market concentration.”¹²⁹ Further, the process of defining markets and analyzing concentration in the course of merger review is “guided by the overarching principle that the purpose of defining the market and measuring shares is to illuminate evaluation of competitive effects.”¹³⁰ Thus, for market definition to be a useful tool in evaluating the potential competitive effects of mergers, there should, in general, be a direct, positive relationship between concentration and price over a relevant range in an appropriately defined relevant product market.

The econometric findings presented in this study suggest that while in the past there may have been some basis for a relevant market definition limited solely to spot advertising on broadcast television, the growth of digital media has widened the contours of the relevant market that should be applied when evaluating the effect of a proposed merger on the price of local broadcast television advertising. The regression results show that from 2009 to 2011 there was a modest positive, statistically significant relationship between local television broadcaster concentration and price. However, from 2012 to 2015, there was a statistically significant reduction in the magnitude of the price-concentration relationship resulting in a net effect statistically indistinguishable from zero. From 2016 to 2018, this trend continued with further reduction of the price-concentration relationship and the net effect remaining statistically indistinguishable from zero.

The disappearance of the price-concentration relationship over the latter part of the sample period belies the presumption that television broadcasters compete meaningfully only with each other. Whether local advertisers are now turning to advertising on cable television, digital media, or other advertising outlets, the results indicate the need for antitrust regulators to consider a broader product market definition that recognizes the competitive significance of substitution to alternative media. The disappearance of the price-concentration relationship is also consistent with a decreasing number of local advertisers who have inelastic demand for local broadcast television advertising due to its unique characteristics since these formally inelastic customers now have a broader set of alternatives that satisfy their needs. As a result, the ability of local broadcasters to price discriminate and charge higher prices to these customers has diminished.

Because the most important trend in advertising over this time period was the rapid growth of digital media, the empirical findings documenting the dissipation of the price-concentration

¹²⁸ We also estimated the regression using the number of firms in a geographic market, the Facebook adoption regression, and the YouTube adoption regression on the entire dataset of 208 DMAs and found similar results. When the ten outlier DMAs are included in the sample, the results are similar to the results shown in Table 4. The direction of the effects and the pattern of statistical significance are identical across these three regressions to the primary regression sample. The magnitudes of the coefficient estimates and the standard errors are also highly comparable.

¹²⁹ *Merger Guidelines* at 7.

¹³⁰ *Merger Guidelines* at 9-10.

relationship over time are evidence of the competitive significance of digital media as a substitute for spot advertising on broadcast television. Furthermore, direct evidence of the role played by digital media in disciplining local broadcast advertising prices is provided by the regression analyses of the relationship between Facebook and YouTube adoption and the price-concentration relationship. These analyses indicate a positive and significant relationship between broadcast television concentration and price in DMA-quarters with very low levels of digital media adoption; however, based on current adoption rates, the analysis indicates that today the net price-concentration relationship is slightly negative but statistically indistinguishable from zero across all DMAs in the sample.

These findings indicate that a market definition restricted solely to the sale of local broadcast television spot advertising is, as a general matter, too narrow to have probative value in the context of mergers involving local television broadcasters. In terms of the Type I/Type II error dichotomy discussed above, a market definition standard ignoring the competitive significance of digital media will be likely to generate Type I errors to the detriment of consumers and competition. This conclusion, however, should not be taken as favoring blanket approval of all broadcast television mergers. Rather, our findings should be interpreted as establishing a strong presumption that advertising on digital platforms is in the same relevant market as advertising on local broadcast television.

An antitrust and competition policy analysis that starts with the presumption that the relevant market includes both local broadcast television advertising as well as advertising on digital platforms has several implications for the way the Division reviews proposed transactions in this area.

First, such an approach will give the Division the foundation to conduct a competitive analysis consistent with the way advertisers actually choose among competing media in today's marketplace.

Second, by considering and gaining a broader understanding of the advantages and disadvantages of digital advertising, which may vary from market to market, the Division will be in a much better position to understand the market-specific circumstances that will determine the likely competitive impact of a proposed broadcast television merger.

Third, in a dynamic market that has seen rapid and significant growth in digital advertising, the Division should be cautious in drawing conclusions about the presence of market power or the competitive impact of proposed broadcast television mergers based on market shares and concentration statistics that are calculated using only local broadcast television advertising revenues. A move towards finding and analyzing direct evidence of competitive effects would be a way to avoid the pitfalls of relying on measures of market share and concentration that could lead the agency to infer the presence of market power when there is none.

V. Summary and Conclusions

In its reviews of proposed mergers and acquisitions, the Antitrust Division gathers and assesses substantial amounts of both public and confidential information from the merging parties and from other market participants, including information specific to the transaction and to the product and

geographic markets involved. An analysis like this one cannot take the place of such transaction-specific information and analysis. However, our empirical results, combined with the contextual evidence we present of the growing reach, capabilities and adoption of digital media platforms, strongly suggest that it can no longer be presumed that local broadcast television advertising constitutes a separate relevant market for purposes of competition analysis.

In an evolving market that has seen rapid and significant growth in digital advertising, it is time for the Division to presumptively define a relevant market that includes both advertising on digital platforms and local broadcast television advertising. With respect to its review of the competitive impact of proposed broadcast television mergers, such a presumption would modernize the Division's approach, allow the Division to focus on the market-specific issues and questions that matter most, and minimize the false inferences that can arise by relying too heavily on market share and concentration measures that do not capture competitive realities.

Appendix: Distribution of Changes in HHI

As discussed in Section IV.A.2, changes in HHI in the BIA data are caused either by changes in market structure, which can take the form of entry, exit, consolidation, or divestiture, or changes in revenue among existing firms in a DMA. The analysis presented here considers the extent to which the variation in HHI in the underlying data is due to changes in market structure. Table A-1 presents summary statistics regarding the distribution of changes in HHI in the regression sample.

**TABLE A-1:
DISTRIBUTION OF CHANGES IN HHI IN REGRESSION SAMPLE**

Observations	Count	Average HHI	Average Firms	Average Δ HHI
Total	7,920	3,264	6	5
With Change in HHI	1,826	3,274	6	20
With Change in # Firms	224	2,929	8	93
With Change in # Firms and HHI>2,500	125	3,669	5	172

Source: BIA data.

Across the 7,920 DMA-quarter observations in the regression sample the average HHI is 3,264, the average number of firms is six, and the average change in HHI is five. However, because revenue changes are only reported annually in the BIA data and because there is no change in market structure in most quarters, of the 7,920 observations in the regression sample, 6,094 observations (77 percent) involve no change in HHI. For the 1,826 observations where HHI changes, the average change in HHI is 20. In contrast, the average change in HHI is 93 for the 224 observations where the net number of firms changes due to entry, exit, consolidation or divestiture, indicating that changes in market structure have a substantially larger effect on changes in HHI than changes in revenue.

Table A-1 also shows that for the observations involving a change in the net number of firms, the average HHI is lower than the sample average and the number of firms is higher. It is therefore useful to examine the significance of changes in HHI in high concentration markets (defined, following the Merger Guidelines, as markets with an initial HHI of 2,500 or more) as such markets are of particular interest for merger review. The last row of Table A-1 shows that changes in the number of firms in high concentration markets are associated with even larger changes in HHI, with an average change in HHI of 172. These results demonstrate that in the regression sample, the variation in HHI due to changes in market structure is economically significant.

In the BIA data, annual revenue is reported at the station level. However, in some cases, revenue data is missing. BIA codes these missing revenue observations as zeroes, and thus it is not possible within the data to distinguish missing data from true zero revenue observations. Because we determine firm-level entry and exit based on station-level revenue, the presence of missing revenue data may lead to an overstatement of the number of true firm-level entry and exit events. To evaluate the extent to which this uncertainty regarding entry and exit presents a threat to the reliability of the statistical analysis, Table A-2 re-examines the distribution of changes in HHI under the worst-case assumption that all of the entry and exit events reported in the data are spurious. Specifically, for each station, any zero revenue values are recoded to the value of revenue

for the most recent observation that has a non-zero revenue value, or, in cases where zero values occur in between two non-zero revenue values, the average of the most recent non-zero revenue values.

**TABLE A-2:
DISTRIBUTION OF CHANGES IN HHI IN NO ENTRY/EXIT SAMPLE**

Observations	Count	Average HHI	Average Firms	Average ΔHHI
Total	7,920	3,229	6	6
With Change in HHI	1,838	3,243	6	26
With Change in # Firms	112	3,025	8	263
With Change in # Firms and HHI>2,500	71	3,673	5	398

Source: BIA data.

Table A-2 shows that although there are now fewer observations where the net firm count changes, the average change in HHI associated with these observation increases, and there is still significant variation in concentration associated with changes in market structure. Estimating the regressions from Table 4 using this adjusted sample, we find that the results are very similar both in terms of direction and magnitude.

To further evaluate the robustness of our analysis to alternative assumptions regarding entry and exit, we also examined each entry and exit event individually, distinguishing between events that likely represent true entry or exit and events likely classified as entry or exit as a result of missing data. For events likely to represent true entry or exit, we maintained the original data values as in the primary sample, whereas for events unlikely to represent true entry or exit, we recoded zero values according to the procedure described above. Table A-3 reports the distribution of changes in HHI based on our best estimate of true entry and exit events.

**TABLE A-3
DISTRIBUTION OF CHANGES IN HHI IN LIKELY ENTRY/EXIT SAMPLE**

Observations	Count	Average HHI	Average Firms	Average ΔHHI
Total	7,920	3,245	6	6
With Change in HHI	1,835	3,258	6	25
With Change in # Firms	153	3,024	8	190
With Change in # Firms and HHI>2,500	94	3,700	5	301

Source: BIA data.

The analysis indicates that there are a significant number of entry and exit events in the data. Station level entry or exit can occur for a variety of reasons including a previously inactive/active station going on/off the air, a transition to or from a commercial station format without advertising such as stations airing only infomercials or a transition to or from a non-commercial format. Again, estimating the regressions using this revised sample produces results very similar to the primary results in terms of direction and magnitude. Due to the robustness of the results to different ways of treating entry and exit, our finding that the BIA data has identified a large number of true entry

and exit events and the benefits of avoiding, where possible, ad hoc adjustments to the underlying data, in our primary analysis we do not make any adjustments to the data related to missing revenue.

Finally, as noted in the text, the BIA Kelsey station ownership data do not reflect joint agreements between stations, including joint sales agreements (JSAs), shared services agreements (SSAs), local marketing agreements (LMAs), and time brokerage agreements (TBAs). We note, however, that the DOJ's stated policy is to "treat any two stations participating in a JSA (or agreement similar in substance to a JSA) as under common ownership."¹³¹ Accordingly, we used data from S&P to calculate HHIs, treating stations engaged in JSAs or other joint agreements as though they were commonly owned, and re-estimated the model.¹³² The results do not differ materially from our primary results – indeed, they are nearly identical. This outcome is not surprising, for at least two reasons. First, including JSAs and other joint agreements had a relatively small effect on the HHI changes that motivate our results, increasing the number of changes in HHI from 224 to 279. Second, the S&P data indicate that there have been very few new joint agreements initiated since 2016, suggesting that the temporal pattern of declining price effects identified by our econometric analysis is not the result of joint agreements.

¹³¹ See U.S. Department of Justice, *In the Matter of 2010 Quadrennial Regulatory Review, Ex Parte Submission of the U.S. Department of Justice*, Federal Communications Commission, MB Docket No. 09-182 (February 20, 2013) at i.

¹³² See S&P Global, Station-by-Station JSA/SSA/LMA/TBA Database (2019).

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Attachment B

2021 Radio Station Advertising Revenues by Market Rank

	Nielsen Audio Market Size Ranges							
Column1	Markets 1-10	Markets 11-25	Markets 26-50	Markets 51-75	Markets 76-100	Markets 101-150	Markets 151-200	Markets 201-253
Number of Commercial Stations	581	699	811	716	623	964	848	744
Average Rev. per Station (000s)	\$4,632	\$2,284	\$1,626	\$994	\$642	\$569	\$521	\$347
<i>Source: BIA Media Access Pro, May 19, 2022</i>								

Attachment C



“Online Platforms and Market Power, Part 1: The Free and Diverse Press”

**United States House of Representatives
Committee on the Judiciary
Subcommittee on Antitrust, Commercial and Administrative Law**

**September 2, 2020
Statement for the Record**

**Gordon H. Smith
President and CEO, National Association of Broadcasters**

Introduction and Summary

Thank you for soliciting our views on competition in digital markets and its impact on a free and diverse press, local journalism and radio and television broadcasters. I am pleased to submit this statement on behalf of the National Association of Broadcasters (NAB) and its more than 7,500 local television and radio station members who serve your constituents across the United States.

The history of journalism is the history of America. From our country’s beginning, the right of the press to challenge the government, root out corruption and speak freely without fear of recrimination has been a central tenet of our democracy. For 100 years, broadcasters have served democratic values, the First Amendment and the listening and viewing public in beneficial, significant and unique ways that, even today, have no substitute. Broadcast stations continue to be among the most trusted sources of news and information for all communities throughout the U.S. because broadcast journalism is rooted in localism and the public interest. Most importantly, over-the-air radio and television are still free to the public and accessible to all Americans.

In today’s media marketplace, trusted and fact-based news and local content that reflect America’s diverse communities are more critical than ever. The current

coronavirus pandemic has illustrated the value and demand for local broadcasting to educate and inform communities and help keep them safe. As during all emergencies or times of crisis, local broadcasters have not only served the public through continued reporting, but also through public service announcements (PSAs) and other myriad contributions, such as organizing food banks and blood drives, airing church services and high school graduations, enhancing children's educational programming and more. To date, TV and radio stations have aired NAB's COVID-19 PSAs more than 765,500 times for an estimated ad value of more than \$156,500,000 – and these numbers do not include the likely much greater number of other coronavirus-related PSAs aired by NAB members.

Yet, even as the demand for free, local and reliable content remains high, its provision is being undermined on multiple fronts. In the short-term, the current pandemic has caused massive declines in the broadcast industry's advertising revenues, resulting in severe economic harm that threatens the continued viability of many TV and, especially, radio stations. In the longer-term, the revolution in digital technologies and the exponential growth of the internet have fundamentally altered the media and advertising landscape. This transformation has stacked the competitive deck against broadcast stations and other media providing news and information, especially local content, to communities across the country. As we explain in detail below, local journalism is now at risk due to the unchecked competitive position held by a handful of dominant digital technology platforms in today's marketplace.

As an initial matter, local news production is costly for broadcast stations. News costs consistently account for about one quarter of TV stations' total annual operational expenses, and stations also make major capital expenditures to support their news operations. Unsurprisingly, many studies have shown that TV stations earning higher revenue produce more local news programming. Because broadcast stations provide over-the-air (OTA) services free to the public, they – and their local news operations – must depend heavily (and, in the case of radio, almost entirely) on advertising revenues.

Unfortunately, over the past two decades, radio and TV station ad revenues have significantly fallen, as the advertising market has become dominated by a few giant digital platforms. This year, the U.S. advertising revenues of a single company – Google – are projected to exceed the *combined* ad revenue of *all* TV and radio stations in the country by over \$8 billion. The market capitalizations of the largest radio and TV station groups are but a fraction of one percent of the market caps of Google, Facebook or Amazon, and stations increasingly struggle to compete for vital ad revenue against entities of this scale and scope.

Beyond diverting advertisers – and crucial revenue – away from local broadcast stations throughout the country, the digital platforms also control the technologies that power both content discovery (search) and digital advertising. Whether consumers use search engines, social networks, voice or video platforms, or even broadcasters' own apps to access news and other content, decisions made unilaterally by a few dominant digital technology giants impede local broadcasters' ability to connect with their audiences online. Earlier this year, for example, after many local stations added a COVID-19 category to their news apps, Google unilaterally flagged and removed some of

those apps from its store, thereby undercutting stations' commitment to providing up-to-date local and state coverage of the pandemic.

The platforms' technological control and lack of transparency also permit them to impose advertising limits and policies that impede stations' ability to effectively monetize their own content online. For instance, the platforms unilaterally determine which content is eligible to be monetized and decide the share of revenue they retain versus the amounts passed on to the content providers that bear all the costs of producing the quality content that financially benefits the platforms. Due to the platforms' market power, local broadcasters, for example, see at best a little more than half of the revenue from video ads on YouTube, and Facebook reportedly offers the same revenue share for in-stream ads.

It is no answer to tell broadcasters that, if they feel disadvantaged by the policies and revenue opportunities offered by the dominant platforms, they can decline to publish their content on Google, YouTube or Facebook and forego availability via various apps or devices. Because hundreds of millions of U.S. consumers use Facebook, Google and YouTube, and own smartphones, tablets and smart speakers produced by companies like Apple and Amazon, local stations have no real choice. Beyond offering OTA services, broadcasters must be available on all major platforms and types of devices to remain relevant to audiences and advertisers in the digital age. As a result, TV and radio stations lack bargaining power when dealing with the digital giants that have become gatekeepers for content providers, including local media outlets, seeking to reach audiences and monetize their content online. The digital giants have clear financial incentives to keep consumers engaged with their own platforms, content and apps, and lack effective incentives to adopt policies and practices that promote or financially reward the providers of other content, including local news.

In short, the dominance of the leading digital platforms significantly and increasingly impairs broadcasters' ability to earn the ad revenues needed to support production of local news and information. Not only do stations struggle to attract advertisers, both on-air and online, while competing against digital giants that dwarf them in scale and scope, but those platforms' control of the technologies that power digital advertising further impede broadcasters from recovering the considerable costs of producing local content in the first place. The coronavirus pandemic and recession, moreover, have only exacerbated the structural economic problems facing ad-supported media outlets that consumers and communities rely on for local news and important coverage of emergency events.

As this Committee considers solutions to the competition problems presented by the digital platforms and their detrimental impact on a free, diverse and reliable press, we emphasize our support for laws and policies that adequately address the unique role of free and local OTA broadcasting and its value in a democratic society. We commend Chair David Cicilline and Rep. Doug Collins on the introduction of the Journalism Competition and Preservation Act. As our newspaper brethren have demonstrated, there are significant antitrust-related concerns for news publishers that directly affect the continued viability of local journalism. While both our industries face similar existential

threats, potential solutions need to take account of the unique circumstances affecting radio and TV broadcasting and local stations' news operations.

I. Maintaining Local Broadcast News Operations and Producing Quality Local Journalism Requires Significant Financial and Staff Resources

Local news production is costly for broadcast stations. Over the period 2003-2018, news costs, on average, accounted for nearly 24 percent of TV stations' total expenses (and nearly 26 percent of the total expenses of ABC/CBS/Fox/NBC stations).¹ From 2013-2018, stations nationwide spent an average of over \$3.0 million per year producing local news, with major network affiliates expending an average of nearly \$3.6 million annually. Stations in larger markets with more resources spend much greater amounts. From 2013-2018, the average news expenses of TV stations in the ten largest markets reached almost \$9.7 million annually, while ABC/CBS/Fox/NBC stations in the top ten markets spent an average of nearly \$15.8 million annually on news.² In addition to these significant annual operational costs, stations also make major capital expenditures (e.g., the purchase of satellite trucks) to support their news operations.

Given these high costs, many studies unsurprisingly have found that TV stations earning higher revenues offer more local news and/or public affairs programming.³ Radio and TV stations in mid-sized and small markets earn but a fraction of the advertising revenues earned by large market stations, due to the smaller economic bases and limited available advertising revenues in those markets.⁴ As a direct consequence of their limited ad revenues, broadcast stations in smaller markets can afford to hire fewer news personnel, and they offer lesser amounts of local news programming.⁵

¹ See NAB Television Financial Reports 2004 to 2019.

² See NAB Television Financial Reports 2014 to 2019.

³ See, e.g., J.A. Eisenach and K.W. Caves, *The Effects of Regulation on Economies of Scale and Scope in TV Broadcasting*, at 4, 45-46 and Table 8 (2011) (Economies of Scale Study), attached to Reply Comments of NAB, MB Docket No. 10-71 (June 27, 2011) (citing numerous empirical studies finding a "positive and statistically significant relationship between revenue and local news production"); accord FCC, D. Shiman, *The Impact of Ownership Structure on Television Stations' News and Public Affairs Programming*, Media Ownership Study #4, Section I, at 21 (2007); P. Napoli, *Television Station Ownership Characteristics and Local News and Public Affairs Programming: An Expanded Analysis of FCC Data*, 6 Info: The Journal of Policy, Regulation, and Strategy for Telecom., Information, and Media 112, 119 (2004).

⁴ According to BIA, in 2018 the average radio station in the smallest Nielsen radio markets (201-265) earned only 7.1 percent of the amount of ad revenue earned by the average radio station in the top-10 markets. Similarly, the average radio station in markets 76-100, 101-150 and 151-200 earned only 13.4, 11.7 and 10.5 percent, respectively, of the average top-10 station. BIA Advisory Services, *Local Radio Station Viability in the New Media Marketplace*, at 14 (Apr. 19, 2019) (BIA Radio Study), Attachment A to Comments of NAB, MB Docket No. 18-349 (Apr. 29, 2019). In 2017, the average TV station in the top-10 Designated Market Areas (DMAs) earned nearly 12 times the amount of ad revenues earned by the average station in the smallest DMAs (151-210) and about eight times the amount earned by stations in DMAs 101-150. See Attachment G to Comments of NAB, MB Docket No. 18-349 (Apr. 29, 2019) (citing BIA data).

⁵ According to the Radio Television Digital News Association's (RTDNA) most recent survey, the average TV news station aired 5.9 hours of local news on weekdays, with small market stations (DMAs 151-210) airing an average of 4.6 hours and stations in the top-50 DMAs airing about 6¾ hours per day. Notably, TV

Notably, RTDNA's surveys also reveal the economic pressures on local broadcast news operations. Over the past five years, only about three-fifths (60 percent) of TV stations have reported profitable local news operations, while many radio stations in markets of all sizes struggle to make local news programming financially viable.⁶ Emergency journalism places particular financial stress on broadcasters, as local stations often cover disasters and crises 24/7, foregoing their regular advertiser-supported programming while incurring extra costs, such as overtime for employees.⁷ And as TV and radio stations face ever greater financial challenges due to profound competitive changes in the advertising marketplace, they may be unable to maintain their current levels of local news production, let alone improve the quantity or quality of their local journalism.⁸

II. Competitive Dynamics in Today's Advertising Marketplace Are Undermining Broadcast Stations' Ability to Earn the Revenues Necessary to Support Local Journalism

Because broadcast stations provide over-the-air (OTA) services free to the public and cannot rely on subscription fees or pay walls, they – and their local news operations – depend heavily (and, in the case of radio, almost entirely) on advertising revenues. BIA has estimated that, from 2000-2018, local TV stations' total OTA ad revenue fell by 13.4 percent in nominal terms and by 40 percent in real terms (*i.e.*, after accounting for

stations with very small news staff (1-10 employees) aired only 1.2 hours of local news each weekday, while stations with very large news staff (over 50 employees) aired 8.6 hours per day. RTDNA, Bob Papper, *A Shocking Development: A Small Increase in Local TV Newsrooms . . . and a Record Amount of Local News* (May 15, 2019). The same holds true for radio stations. See RTDNA, Bob Papper, *Most Radio Stations Run Local News . . . and a Little More of It This Year* (May 15, 2019) (stating that the "bigger the staff, the more news a [radio] station runs," without exception).

⁶ See RTDNA, Bob Papper, *The Business of News: TV* (May 15, 2019); RTDNA, Bob Papper, *Radio News Profits Edge Down but Budgets Edge Up* (May 15, 2019) (according to responding news directors/general managers with knowledge of their stations' finances, only 12.4 percent reported their stations earned a profit on news in 2018, consistent with the previous five years).

⁷ See FCC, Steven Waldman, *The Information Needs of Communities*, at 79-80 (July 2011) (citing examples, including one TV station in New Orleans that stayed on air for 16 days straight without commercials during Hurricane Katrina).

⁸ Beyond earning additional revenues, broadcasters also could better support their local news operations if they were permitted to achieve greater economies of scale and scope by acquiring more stations in local markets, thereby spreading the high costs of news production across more outlets. Multiple economists have found that TV broadcasting generally, and local news production specifically, are "subject to strong economies of both scale and scope," which are, by definition, "associated with falling unit costs of production" and "hence are *prima facie* welfare enhancing." Economies of Scale Study at 1-3 (concluding that placing undue limits on broadcasters' ability to achieve scale and scope economies "result[s] in higher costs, lower revenues, reduced returns on invested capital [and] lower output," including "significantly reduc[ed]" local news output); *accord* Decl. of M. Israel and A. Shampine, Comments of NAB, MB Docket No. 10-71, at Appendix B ¶¶ 49-51 (June 26, 2014) (finding that economies of scale and scope exist in TV broadcasting and that both lead "to increased investment in news programming"). Decades-old FCC rules, however, prevent achievement of these beneficial scale economies by, among other restrictions, prohibiting broadcasters from owning more than one TV station in most DMAs.

inflation).⁹ BIA data also show that the radio industry's total OTA ad revenues fell 25 percent from 2004 to 2018, even without adjusting for inflation.¹⁰

Rather than any temporary business cycle effects, the long-term and continuing declines in local stations' ad revenues reflect the transformation of the advertising marketplace due to digital technologies and the explosive growth of a small number of giant digital ad platforms. In just a few short years, these platforms have come to dominate the competitive landscape. As the ad revenues of traditional media fell, Kagan estimated that digital (online/mobile) ad revenues grew by a Compounded Annual Growth Rate of 17.7 percent from 2010-2019, with its share of the total U.S. advertising market growing from 12.6 percent in 2010 to 42.2 percent in 2019.¹¹ Kagan projects these trends will continue, with digital capturing 59.5 percent of overall U.S. advertising revenue by 2029, and – even more ominously for local TV and radio stations – predicts digital gaining still higher shares of local ad dollars.¹²

NAB and our members have attested to the real-world, local market consequences of this fundamental shift in the advertising market. At the Federal Communications Commission (FCC), radio and TV stations from across the country have recounted losing multitudes of local advertisers across all industry sectors, and large percentages of their ad dollars, to digital platforms, including Google, YouTube and Facebook,¹³ which, according to Borrell Associates, has become the most popular marketing vehicle for local advertisers.¹⁴ At a Department of Justice (DOJ) workshop on competition in TV and digital advertising last year, NAB and representatives of TV station groups, cable operators and online platforms all agreed – contrary to DOJ's woefully outdated view of the marketplace – that TV broadcasters, multichannel video providers and digital platforms directly compete for advertising.¹⁵

⁹ BIA Advisory Services, *The Economic Irrationality of the Top-4 Restriction*, at 16 and Fig. 10 (Mar. 15, 2019) (BIA TV Study), Attachment B to Comments of NAB, MB Docket No. 18-349 (Apr. 29, 2019).

¹⁰ See BIA Radio Study at 10-11 and Fig. 7.

¹¹ Kagan Market Intelligence, Derek Baine, *Rapidly changing video world impacts advertising market*, at 6-7 (2020) (estimating that radio and TV stations had a 4.7 percent and 7.1 percent share, respectively, of total U.S. advertising revenues in 2019).

¹² See *id.* at 8-10 (projecting higher growth rates for digital advertising in local markets than at the national level over the next decade and estimating that digital platforms will earn two-thirds of total local ad dollars in 2023 and surpass 70 percent later in the decade).

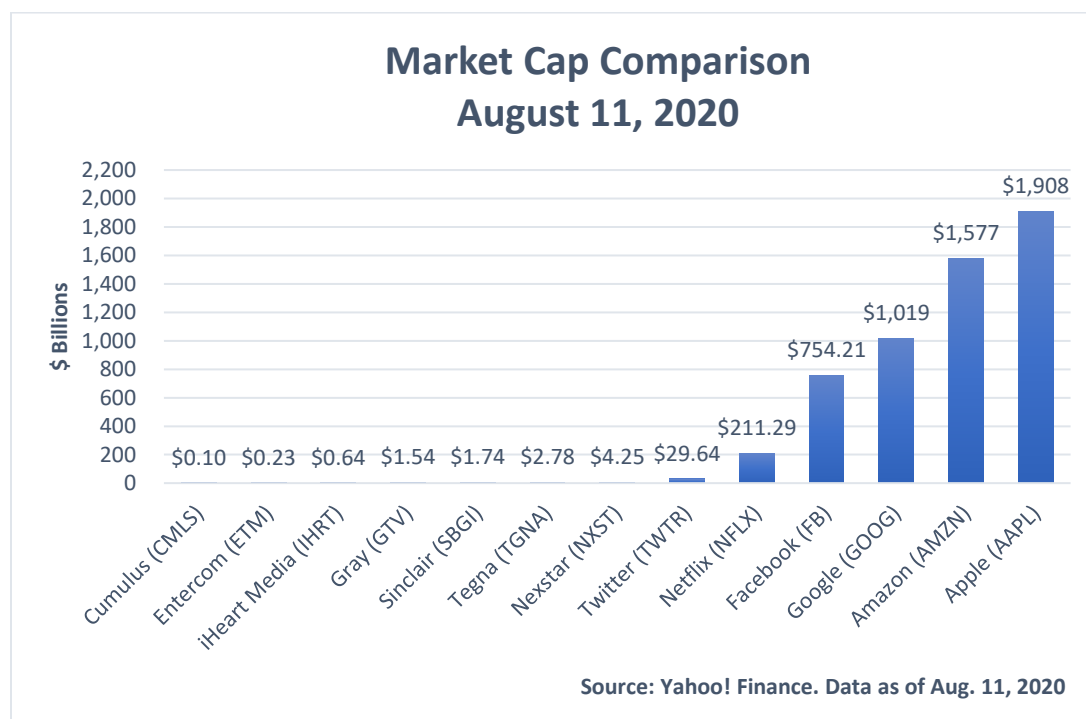
¹³ See, e.g., Comments of Meredith Corp., MB Docket No. 18-349, at 2 (Apr. 29, 2019); Joint Reply Comments of Broadcast Licensees, MB Docket No. 18-349, at 10-13 (May 29, 2019); Comments of Connoisseur Media, *et al.*, MB Docket No. 18-349, at Exhibit C (Apr. 29, 2019) (providing declarations from ten radio companies as to their losses of specific advertisers, e.g., auto/RV dealers; banks/credit unions; hospitals and various medical service providers; local and chain restaurants and bars; real estate companies; state lotteries; local colleges; and innumerable retail businesses and service providers, including home stores, garden centers, repair services, jewelry stores, dry cleaners, *etc.*).

¹⁴ Borrell Associates, *2019 Benchmarking Local Media's Digital Revenues*, Executive Summary, at 4.

¹⁵ See Remarks of Rick Kaplan, general counsel and executive vice president, NAB, "Executive Suite: Competitive Dynamics in Advertising: Does Local Broadcast Compete with Cable Spot and Online Advertising?", Panel at DOJ Antitrust Division, *Public Workshop on Competition in Television and Digital*

The massive shift in advertising to other platforms has profoundly affected local broadcasters. Stations in mid-sized and small markets with limited economic bases have been disproportionately impacted because any significant loss of revenue has an outsized effect on their ability to pay the largely fixed costs required to operate and to produce or acquire news and other programming.¹⁶ Implementation of the next generation broadcast TV transmission system, ATSC 3.0 (Next Gen TV), will require notable investments by local stations. Only those TV stations with sufficient revenues will be able to make the necessary investments and offer the improved services that Next Gen TV enables, including ultra-high definition programming, better emergency alerting, mobile services, interactivity, hyper-local content and more.¹⁷

The sheer size and scale of the digital platforms that dominate the advertising landscape impair local stations' ability to compete effectively for vital ad revenue. The market capitalizations of the largest TV and radio station groups are but a fraction of one percent of the market caps of Google, Amazon and Facebook.



Advertising (May 2-3, 2019) (DOJ Workshop); Written Comments of NAB, DOJ Workshop (June 17, 2019). Inexplicably, DOJ continues to adhere to its analog-era view that broadcast TV stations compete for advertising only against other TV stations, refusing to recognize that the competitive world has changed since the mid-20th century. As a result, DOJ's merger and acquisition policies continue to prevent local TV broadcasters from achieving the vital economies of scale that would improve their long-term financial viability and provide much needed support for stations' local news operations. See note 8, *supra*.

¹⁶ Broadcast stations have substantial fixed costs (*i.e.*, the basic costs of running a station, including engineering, sales, programming, *etc.*) that must be met before they can hire additional staff, upgrade equipment or expand their news coverage. See, *e.g.*, BIA Radio Study at 31.

¹⁷ See BIA TV Study at 2.

In 2020, the U.S. advertising revenues of a single company – Google – are projected to exceed the *combined* ad revenues of *all TV and radio* stations in the country by more than \$8 billion, and Facebook’s advertising revenues will exceed the combined ad revenues of all broadcast stations by a small margin.¹⁸ Industry observers routinely refer to digital advertising as dominated by the Facebook-Google “duopoly,” which in recent years has controlled over 60 percent of U.S. digital spending, with Amazon, “[r]ather than disrupting the duopoly,” now “looks to have joined it as a third giant.”¹⁹ The unregulated and unchecked growth of the advertising and technology giants is in stark contrast to the severe and archaic restrictions placed on the scale and scope of local media providing local news to the public.²⁰

When asked about competition in its local market, a radio broadcaster in central New York state said last year:

If you add all the radio money in the market, it’s about 7 cents on the dollar... In five years, Facebook and Google have taken more money out of the marketplace than all the radio companies combined. There has been a pivot point on who the competition is. No longer is it the radio guy across the street.²¹

This statement incapsulates the serious challenges now facing radio and TV stations. Simply put, the structure of today’s advertising marketplace, dominated by massive digital platforms present in every local market in the U.S., inhibits TV and radio stations from competing effectively for the ad dollars necessary to maintain their day-to-day operations and to sustain – let alone improve – local news, emergency journalism and other highly valued free, OTA programming.

The coronavirus pandemic and recession have only exacerbated the problems facing local broadcast journalism. The pandemic’s shock to the advertising market caused stations’ revenues to plummet. This past spring, radio broadcasters reported ad revenue declines between 40-70 percent and local TV stations experienced drops of 40-60 percent.²² Broadcasters have been forced to reduce salaries and lay off or furlough

¹⁸ eMarketer estimates that Google’s and Facebook’s U.S. ad revenues will be \$39.58 billion and \$31.43 billion, respectively, in 2020. eMarketer, *Google Ad Revenues to Drop for the First Time* (June 23, 2020). According to BIA, local TV and radio station ad revenues (counting both their OTA and much more limited digital revenues) will total \$31.3 billion this year. See BIA Advisory Services, *BIA Revises Local Radio Advertising Estimates Down to \$12.8B in 2020 Due to Pandemic* (June 25, 2020); BIA Advisory Services, *BIA Lowers 2020 Local Television Station Advertising Revenue Forecast to \$18.5B* (May 21, 2020).

¹⁹ Nicole Perrin, *Facebook-Google Duopoly Won’t Crack This Year*, eMarketer (Nov. 4, 2019) (stating that “[d]igital ad market consolidation shows little sign of stopping,” and projecting that in 2020 about 70 percent of U.S. digital ad dollars “will end up with one of the three leading ad sellers”).

²⁰ For example, the FCC’s newspaper/broadcast cross-ownership ban – adopted in 1975 – still prohibits common ownership of even a single radio or TV station and a newspaper in the same local market.

²¹ David Menconi, *Five Independent Radio Broadcasters Discuss Their Strategies For Small-Market Success*, Billboard (Sept. 17, 2019).

²² Radio Ink, *Just How Bad Is The Ad Revenue Decline?* (May 7, 2020); Harry Jessell, *Magid: Local TV To Feel ‘Devastating’ Ad Impact*, TVNewsCheck (May 4, 2020).

employees, including news staff, and some radio stations have gone silent.²³ Ironically, these advertising-related layoffs occurred at the same time that viewership of local and national broadcast TV news significantly increased, as Americans sought a trusted source of information about the pandemic.²⁴ Given that the overall U.S. ad market took nearly a decade to fully recover from the last major recession in 2008-2009, the advertiser support for broadcast journalism – already undermined by the Facebook-Google duopoly – appears increasingly at risk.

III. The Dominant Digital Platforms Control Much of the Technology That Powers Both Content Discovery and Digital Advertising, Inhibiting Stations' Ability to Reach Consumers and Monetize Their Own Content

Beyond diverting advertisers of all types – and their crucial ad dollars – away from broadcast stations in local markets across the country, the dominant digital platforms also essentially control the technology that powers both content discovery (search) and digital advertising. This control of technology further increases the marketplace dominance of the leading digital platforms and exacerbates the struggles of broadcast stations to earn the revenues needed to fund local journalism or even to reach consumers with their content.

Today, the top platforms direct truly remarkable levels of consumer traffic. Google doesn't just lead the search engine market, "it dominates,"²⁵ with a 87.6 percent share of the market in the U.S. and around 92 percent globally.²⁶ YouTube (owned by Google) has nearly 70.6 percent of the U.S. online video platform market with about 74 percent worldwide,²⁷ and Facebook dominates the social media market, with a 61.3 percent share in the U.S. and around 74 percent globally.²⁸ Consumers access these platforms via smartphones, tablets, smart speakers and other devices designed by a few leading technology companies, such as Apple.

Given their usage by hundreds of millions of consumers, broadcasters must be available via all these platforms and devices to remain relevant to audiences and advertisers in the digital age. Local stations consequently lack bargaining power when dealing with the massive digital companies that essentially have become gatekeepers for content providers, including local TV and radio stations, needing to reach online audiences. These digital giants have clear incentives to keep consumers engaged with

²³ See, e.g., Inside Radio, *Coronavirus-Related Cuts At Saga, Alpha Media, Forever Media* (Mar. 30, 2020); Al Tompkins, *Tegna furloughs local TV news staff, managers take temporary pay cut*, Poynter (Apr. 6, 2020); Inside Radio, *April Saw A Big Spike In Stations Going Silent* (Apr. 29, 2020).

²⁴ See, e.g., Lillian Rizzo, *Local TV Sees Spike in Viewers, Drop in Ads in Coronavirus Crisis*, The Wall Street Journal (Apr. 3, 2020); Rick Porter, *Network Newscasts Keep Up Ratings Momentum During Pandemic*, The Hollywood Reporter (Apr. 22, 2020).

²⁵ Sarah Berry, *2020 Search Market Share: 5 Hard Truths About Today's Market*, WebFX (July 13, 2020).

²⁶ As of July 2020, statcounter GlobalStats, <https://gs.statcounter.com/search-engine-market-share>.

²⁷ <https://www.datanyze.com/market-share/online-video--12/Datanyze%20Universe/youtube-market-share>, accessed August 17, 2020.

²⁸ As of July 2020, statcounter GlobalStats, <https://gs.statcounter.com/social-media-stats>.

their own platforms, content and apps, and no effective incentives to adopt policies and practices that promote the providers of other content, including local news, or permit local stations and other media outlets to fully monetize their online content.

A. Platforms' Unilateral Decisions Heavily Impact Stations' Ability to Reach Consumers

Whether consumers use search engines, social networks, voice or video platforms, or broadcasters' apps to access news and other content online, decisions made unilaterally by a few dominant digital platforms impede local broadcasters' ability to connect online with their audiences. The ranking algorithms used by platforms determine what sources, articles and clips appear, or are "surfaced," to users. While the platforms constantly adjust and tweak them, those algorithms have consistently favored national sources over local sources; frequently favored controversial and polarizing content and opinion sources over high-quality journalism; and can often make it difficult for smaller, local publishers to reach audiences at all. The platforms' ranking changes – often made without consultation with broadcasters or other publishers – additionally can disrupt audience engagement with broadcasters' content, as well as stations' online revenue strategies.

National vs. Local Sources. National sources have a multitude of advantages over local sources online. Regardless of the popularity of a local news source within its market, the total number of page views, shares, followers or other aggregate metrics will necessarily be smaller than those of national outlets. Due to their relatively modest numbers of followers or page views, small market radio and TV stations often have found it difficult to meet the requirements to appear on the first page of search results or even appear at all on news aggregation sites, dramatically reducing their visibility to the online platforms' millions of users. While mid-size and large-market broadcast stations meet the platforms' minimum criteria, national sources are still likely to outrank those local sources due to their greater national followings, even for news stories with significant local components, such as major weather events or natural disasters.

Overall, local news does not seem to be a priority for the major online platforms. For example, even if consumers select local publishers specifically, those local sources do not appear prioritized in their news feed. Local broadcasters also struggle to gain placement on news-centric services. One NAB TV member, for instance, reports attempting to be placed on the Apple News platform for over eight months. During this time, the broadcaster has seen no progress in Apple's monetization review and, due to Apple's review policies, this broadcaster has been unable to gain distribution via Apple News even for non-monetized content.

App store platforms also have policies that heavily disadvantage local news sources. A consumer using their device's app store to install news apps will find national and international outlets' apps recommended at the top of the news category. They will have considerably more difficulty locating the app for their local broadcaster or newspaper, as apps with national reach and a larger potential market inevitably have more users and therefore rank higher in the news category in the platform app stores.

In one revealing case, NAB members report that Apple changed its App Store review guidelines to force station groups that offered a local-specific app to have a single national app. Ultimately, Apple reversed this decision, but notably the number of characters available to describe an app and enable users to search for it would not have been sufficient to include every callsign and/or market information for even mid-sized station groups.²⁹ Had Apple's initial decision prevailed, it would have been virtually impossible for a local station to reach its viewers or listeners via the broadcaster's own mobile app on Apple's phones.

This case clearly illustrates the power over content that companies like Apple exert through their control of digital technologies. As of early 2020, 85 percent of the total U.S. population ages 12+, or 240 million people, owned smartphones.³⁰ Apple is the leading brand of smartphone in the U.S., and it possesses the ability to push its own content (Apple TV+, Apple Music) to the millions of its phones and other devices in consumers' hands, to the disadvantage of other content providers, including broadcasters. Reportedly, Google also has been removing applications for duplicate content without considering the established local brands that separate applications serve.

In addition to the mobile and desktop environments, large platforms' decisions that favor national over local sources also manifest on televisions through over-the-top (OTT) video platforms, such as Amazon Prime Video, Apple TV and YouTube TV. The options that viewers see on televisions when accessing OTT platforms also depend on algorithms developed by these giant international platforms. The result is a consumer experience that favors national over local content, making it increasingly hard for viewers to find news stories and other content relevant to their local communities.

Similarly, voice platforms like Amazon Alexa and Google Assistant disadvantage local broadcasters relative to other, especially national, sources. With Amazon Alexa, stations can develop "skills," enabling listeners to access local stations on smart speakers or similar devices.³¹ However, even if a station undertakes the effort to develop these skills, it can be difficult for users to activate them because skills are not surfaced based on geography. With Google Assistant, the only option for smaller station groups that wish to be accessed via the platform is to go through an aggregator, thereby inhibiting stations' ability to reach audiences more directly. Preliminary research conducted on behalf of NAB suggests that listeners of stations, particularly in small markets, often have difficulty accessing the intended radio station via a voice platform. Confusion can occur when there are multiple stations sharing the same frequency or common name (e.g., 94.7 or "B101") in different markets, as the algorithms take into

²⁹ The Apple App Store limits titles to 30 characters, plus 30 characters for a subtitle, and 100 characters worth of keywords. See <https://developer.apple.com/app-store/product-page/>.

³⁰ Edison Research and Triton Digital, *The Infinite Dial 2020* (Mar. 19, 2020) (Infinite Dial 2020). Fifty-three percent of those ages 12+, or 149 million people, owned tablets by early 2020. *Id.*

³¹ According to Amazon, a skill is "[a] set of actions or tasks that are accomplished by Alexa. Skills are like apps for Alexa, helping customers perform everyday tasks or engage with your content naturally with voice." <https://developer.amazon.com/en-US/docs/alexa/ask-overviews/alexa-skills-kit-glossary.html#s>.

account the popularity – rather than the geography – of stations in determining which station to play.

Consumers often access voice platforms via smart speakers, which Americans are rapidly adopting.³² Smart speakers can influence media consumption, again to the disadvantage of local broadcast stations. For example, owners of smart speakers use Amazon Music more frequently than those without smart speakers, which is unsurprising given that Amazon Alexa is the leading brand of smart speaker.³³ Smart speakers also set default news providers, often major national outlets like CNN rather than local news sources.³⁴

Reporting vs. Opinion and Controversy. Platforms have often placed a higher priority on stories that users interact with, rather than passively consume. In the case of news stories, this tends to result in amplification of stories users feel most strongly about, rather than those that are primarily informative.³⁵ Last year Facebook introduced a section specifically for News in an apparent attempt to offset this effect,³⁶ but its more-popular News Feed continued to rely on user engagement as a key metric to determine ranking. As a result, stories with strong opinions that elicit strong responses are often surfaced at the expense of trusted, fact-based news sources. Again, the platforms' biases negatively impact broadcast stations, which stress factual reporting of local/regional events. More recently, Facebook made another change to its algorithm to prioritize original reporting in its news feed ranking to try to counteract this problem, but it remains unclear how these changes will impact reach.³⁷

Platform decisions that impact news coverage. When Facebook initially introduced its ad archive for all political ads,³⁸ it defined political ads to include any content relating to politics or issues of national importance, which immediately and adversely affected stations' promotion of their news content. Specifically, a publisher may often buy an ad on Facebook to increase the reach of its news story and drive traffic to its website. But if the story is related to coverage of a political campaign or a nationally important issue (e.g., education or immigration policy), then Facebook would deem the publisher's promotional ad to be political, even if the article being linked to was pure fact-

³² As of early 2020, 27 percent of the 12+ U.S. population (76 million people) owned a smart speaker, up from only seven percent in 2017. Infinite Dial 2020.

³³ See Edison Research and Triton Digital, *The Infinite Dial 2019* (Mar. 2019); Infinite Dial 2020.

³⁴ See Rachel Withers, *Is Getting Our News From Smart Speakers a Threat to Media Diversity?*, Slate (Aug. 7, 2018); Nic Newman, *Digital News Project: The Future of Voice and the Implications for News*, Reuters Institute, at 24-25 (Nov. 2018).

³⁵ See *Bringing People Closer Together*, Jan. 11, 2018, available at <https://about.fb.com/news/2018/01/news-feed-fyi-bringing-people-closer-together/>.

³⁶ Introducing Facebook News, Oct. 25, 2019, <https://about.fb.com/news/2019/10/introducing-facebook-news/>.

³⁷ See *Prioritizing Original News Reporting on Facebook*, June 30, 2020, <https://about.fb.com/news/2020/06/prioritizing-original-news-reporting-on-facebook/>.

³⁸ Making Advertising Transparent, October 23, 2018, <https://about.fb.com/news/2018/10/inside-feed-making-advertising-transparent/>.

based reporting. As a result, a station or other publisher would be required to enroll on Facebook as a political advertiser and include the ad promoting its own content in Facebook's political advertising archive. While Facebook has since reversed this policy and exempted most news publishers from its political advertising rules, this and other similar decisions remain solely at the discretion of the dominant platforms, and Facebook and Google are interested parties in the political advertising market. The Facebook-Google duopoly – which, according to eMarketer, “already control[s] 60.8% of the total US digital ad market” – “has an even tighter grip” on digital political ad revenues, “with a combined 77.6% this election cycle.”³⁹

Likewise, the dictates of the platforms' app stores can inhibit consumers' access to important local news coverage. Earlier this year, as state and local governments were rapidly changing policies and guidance around the coronavirus pandemic by issuing and adjusting stay-at-home orders, mask ordinances and school opening plans, many local stations added a COVID-19 category to their news app and included this new category in the app description. Google flagged and removed some of these apps from its store due to the mention of the coronavirus, as it did not consider local news apps to be an authoritative source of health information. Its action directly undercut stations' commitment to providing up-to-date local coverage of the pandemic and was contrary to Americans' increased reliance on local TV station news as a trusted source about the coronavirus outbreak.⁴⁰

Ranking based on technology choices. Google developed a technology called Accelerated Mobile Pages (AMP), which enables pages to load faster on mobile devices. Currently, broadcast stations are *required* to use AMP to be eligible for the Top Stories category in Google search results. While enabling faster loading on mobile devices can be desirable for many reasons, the use of AMP also reduces the ability of a station both to uniquely brand and to effectively monetize content. In a key finding, a major report on digital platforms by the Australian Competition and Consumer Commission recently concluded:

The Accelerated Mobile Page (AMP) format impedes the ability of media businesses to monetize content as effectively as on their own websites. It also creates difficulties with attribution, branding and the sharing of data.⁴¹

Google has announced it is working on a new ranking signal, Google Page Experience, which will replace the requirement for pages to use AMP. These changes, however, will not occur until sometime in 2021, and the impact to stations is still

³⁹ eMarketer, *Facebook Dominates 2019/2020 Political Ad Spending* (Feb. 24, 2020).

⁴⁰ See, e.g., Jon Lafayette, *Virus Crisis Bringing Young Viewers to Local Broadcast*, *Broadcasting+Cable* (Mar. 24, 2020).

⁴¹ Digital Platforms Inquiry Final Report, available at <https://www.accc.gov.au/system/files/Digital%20platforms%20inquiry%20-%20final%20report.pdf>. In particular, the ACCC notes that AMP presents challenges in the areas of monetization by restricting the space available for advertising, diminishes brand awareness by reducing opportunities for publishers to create their own “look and feel,” and enables Google to “retain[] users within its ecosystem and reduce[] monetisation opportunities for media businesses outside of AMP.”

unknown.⁴² Google's development of AMP illustrates how the dominant digital platforms' control of the technologies that publishers must use to reach audiences works to the competitive disadvantage of news providers, including local broadcast stations.

It is, furthermore, unsurprising that the giant digital companies may use their technological control to further their financial interests. Companies earning billions in advertising revenue have incentives to keep consumers engaged with their platforms, content and apps, thereby increasing their traffic and ad revenues. The power of the platforms, combined with their disincentive to promote the providers of other content including local news, results in unilateral decisions that have worked and continue to work to disfavor local media outlets trying to reach online audiences and compete for consumers' time and attention.

B. The Online Platforms' Advertising Limits and Policies Impede Stations' Ability to Effectively Monetize Content and Demonstrate the Platforms' Market Power

Beyond controlling the technologies that power content discovery, the giant digital platforms also control the technologies underlying online advertising and impose advertising policies that impair stations' ability to fully monetize their own content. Advertising on platforms such as YouTube and Facebook is strictly controlled through the platforms' monetization policies. NAB station members report that the determination of what content is eligible to be monetized, as well as revenue splits between the platform and the content owner, are determined *unilaterally* by the platform. This ability to impose the level of compensation that publishers receive clearly demonstrates that the platforms possess significant market power and undue bargaining power over content providers. With regard to local radio and TV stations specifically, the platforms' advertising policies can prove especially detrimental to local broadcasters compared to national sources and fail to provide the same opportunities that broadcasters have for monetizing content on their own websites.

One example of such an ad policy is the minimum content length to be eligible for monetization. Until very recently, Facebook required that videos be at least three minutes long to include advertising, while individual news stories are often less than three minutes. On June 30, Facebook announced that it is testing monetization opportunities for videos as short as 60 seconds, but these are limited to image ads or post-roll ads, which generate less revenue than the mid-roll ads available for longer-form content.⁴³ Facebook's policy – even assuming Facebook unilaterally determines to alter it – would still adversely impact local stations' monetization opportunities.

Another issue is the inability of broadcasters to sell their own ad inventory for their content placed on third-party platforms. When platforms sell ad inventory, they typically allow advertisers to select or exclude broad categories of content to run their ads against.

⁴² Evaluating page experience for a better web, May 28, 2020, available at <https://webmasters.googleblog.com/2020/05/evaluating-page-experience.html>.

⁴³ <https://www.facebook.com/creators/new-ways-to-monetize-on-facebook-instagram>.

News publishers are bundled into a large “news” category that combines respected local broadcasters with clearly partisan and opinion pieces and even fictitious stories. NAB members state that this approach has a negative effect on ad rates for news content on YouTube compared to other categories of content that advertisers find less polarizing.

YouTube offers some more lucrative advertising options, but local broadcasters have generally been unable to avail themselves of these programs. One such program, called YouTube Select, is available to very large, “brand safe” publishers.⁴⁴ This invitation-only program does not appear to include local broadcasters. YouTube also offers some media companies the ability to sell their own ad inventories directly, but the criteria are opaque and the program is not available to all broadcasters, particularly those not owned by larger station groups or major networks.⁴⁵ Here again, the platforms’ unilaterally-set policies operate to the financial detriment of local TV and radio stations serving local communities.

Notably, the online platforms unilaterally decide the share of revenue to be retained by the platform versus the amounts passed on to the actual content providers, which, of course, bear all the expenses of producing the quality content that financially benefits the platforms. As a result of the platforms’ market power, local broadcasters see at best 55 percent of the revenue from video ads on YouTube,⁴⁶ and reportedly Facebook offers the same revenue share for in-stream ads.⁴⁷ This revenue split, coupled with the depression of revenue opportunities resulting from inclusion within an online news category encompassing unreliable “news” sources, results in limited revenue opportunities for broadcasters on these digital platforms.

Even those platforms such as Amazon Fire TV and Roku, which allow publishers to sell their own ad inventory, commonly require publishers to share a percentage of their ad inventory with the platform, in lieu of sharing their ad revenue.⁴⁸ This practice effectively forces publishers to surrender control of their own ad inventory to the platforms as a form of payment. Television broadcasters observe that, overall, the terms available on Roku are better for content creators than the terms on other large platforms, including Amazon Fire TV.

Significantly, much of the technology supporting online advertising is owned by the large platforms. Broadcasters and other publishers rely on the third-party technology platforms to manage and serve relevant ads, based on fees set by the platforms for those

⁴⁴ <https://www.youtube.com/ads/youtube-select/>.

⁴⁵ <https://support.google.com/youtube/answer/7438625>.

⁴⁶ <https://adage.com/article/digital/youtube-ad-revenue-disclosed-google-first-time-topped-15-billion-2019/2233811>.

⁴⁷ <https://digiday.com/media/facebook-video-ad-breaks-creators/>.

⁴⁸ See Roku advertising policy available at <https://developer.roku.com/docs/features/monetization/video-advertisements.md> (requiring that 30 percent of adv inventory be dedicated to Roku with Roku maintaining 100 percent of the revenue on that share). See also Amazon Fire TV advertising policy at <https://developer.amazon.com/docs/policy-center/fire-tv-advertising.html> (requiring that 30 percent of ad impressions be provided to Amazon with Amazon retaining all revenue from those impressions).

services. The proportion of online ad spending that goes to the tech and software intermediaries to execute advertising transactions is quite high according to estimates.⁴⁹ These fees are additional costs for local publishers struggling to recover the substantial expenses of producing news and other content relevant to local communities.

When considering the dominant role of the digital platforms in today's advertising and media landscape, it is no answer to tell broadcasters that, if they feel disadvantaged by the policies and opportunities offered by Google, YouTube, Facebook, Amazon and Apple, they can decline to publish their content on those platforms and forego availability on various apps or devices. Because millions of consumers of all ages use digital platforms and devices including smartphones, tablets and smart speakers, local broadcast stations in fact have no real choice. Broadcasters must be available on all major platforms and via all types of devices to remain relevant to audiences and advertisers in the digital age. As a result, local stations lack bargaining power when dealing with the digital giants that are effectively gatekeepers for content providers, including local media, seeking to reach online audiences. Unfortunately, as described above, these platforms' technologies and unilaterally-set policies hurt local providers of quality journalism and prevent stations from effectively monetizing their own content online. Receiving cents on the dollar does not enable TV and radio stations to recover the considerable costs of producing local content in the first place.

IV. Conclusion

At its core, radio and television broadcasting is about localism and serving American communities. Broadcasters take seriously our mandate to serve the public interest and provide viewers and listeners across America with the information and facts they need to be informed citizens. The value of broadcasting and local journalism in an increasingly digital world has never been more obvious; so too, the threat that the digital platforms' power poses to news publishing and the continued viability of local media outlets has never been greater.

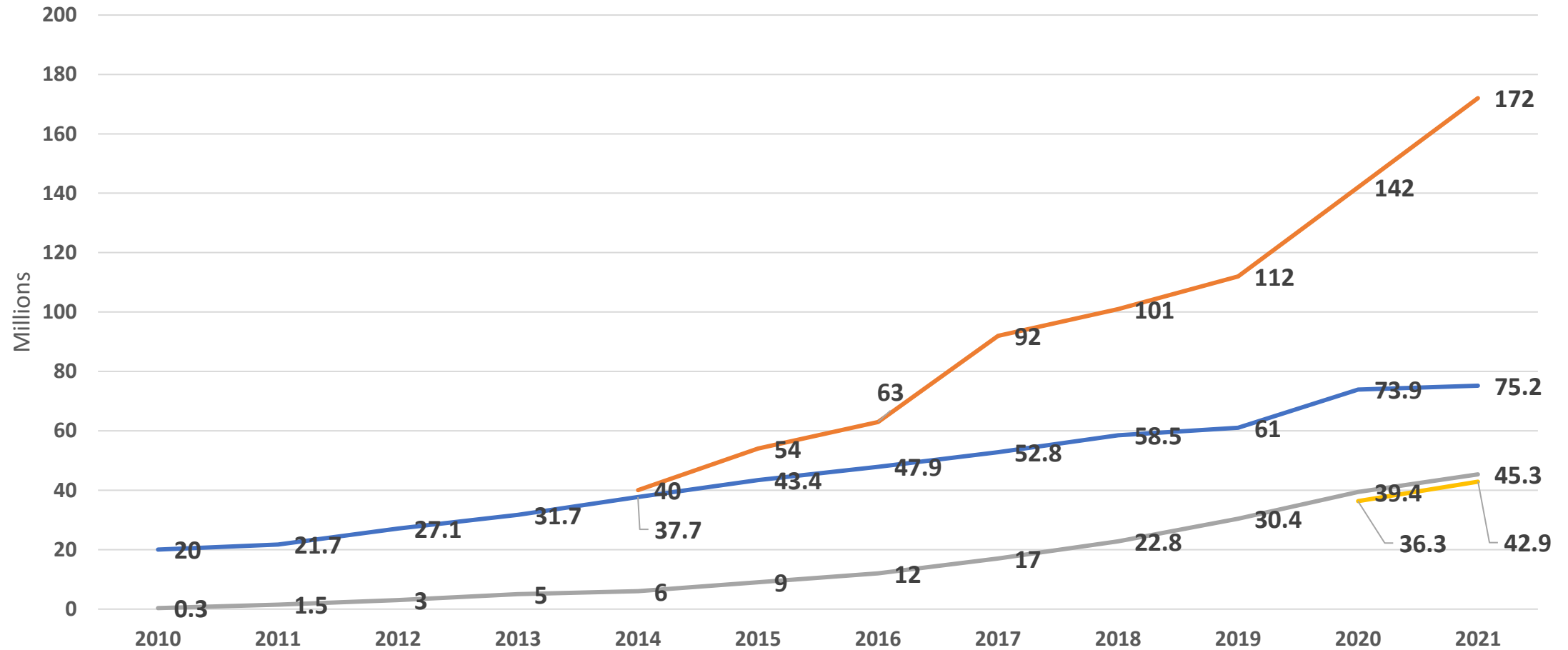
The dominance of the leading digital platforms significantly and increasingly impairs TV and radio stations' ability to earn the ad revenues needed to support production of news and other locally-oriented content. Not only do stations struggle to attract advertisers, both on-air and online, while competing against digital giants that dwarf them in scale and scope, but those massive platforms' specific policies also impede broadcasters' and other media outlets' efforts to derive revenue from their content that consumers access via the platforms. Local journalism is now at risk due to the overwhelming competitive position of a handful of technology companies in today's digital marketplace.

NAB appreciates the opportunity to discuss these issues and looks forward to continuing to work with this Committee.

⁴⁹ See eMarketer, *eMarketer's New Ad Tech Tax Estimates Show One-Third of Spending Goes to Intermediaries* (Aug. 5, 2019), available at <https://www.emarketer.com/content/emarketer-s-new-ad-tech-tax-estimates-show-one-third-of-spending-goes-to-intermediaries>.

Attachment D

Subscribers to OTT Video Services



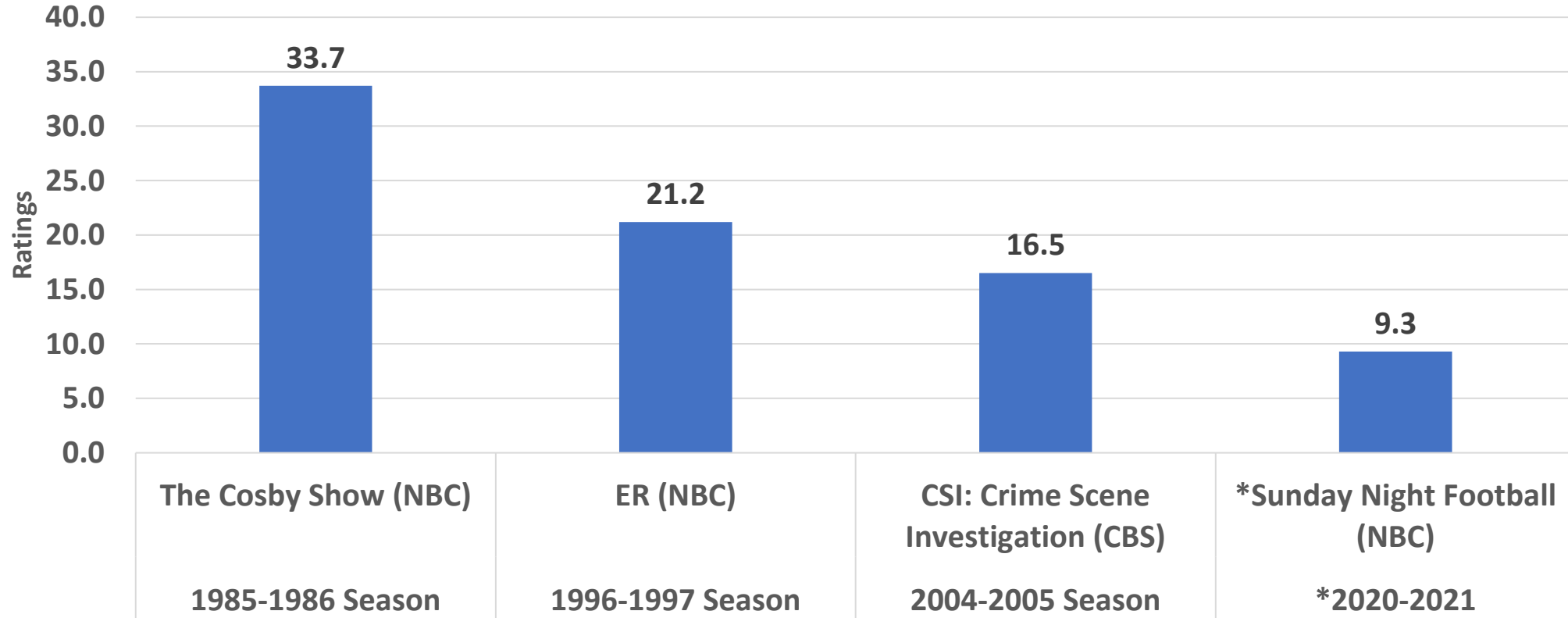
Sources for data:

— Netflix — Amazon Prime — Hulu — Disney+

- Netflix: Retrieved from Statista. Original source Netflix financial statements. Includes U.S. and Canada subscribers. Includes data as of Q4 for each year.
- Amazon Prime: Includes all U.S. Amazon Prime subscribers even those who do not view video. Retrieved from Statista. Original sources Consumer Intelligence Research Partners; [Digital Commerce 360](#) for 2010-2020 data. [Consumer Intelligence Research Partners](#) “Prime Gains Members, Retention in Pandemic” for 2021 data. All years as of Q4 except for 2016 (Q2).
- Hulu: Includes paying subscribers in the U.S. 2010-2019 data retrieved from Statista. 2020 and 2021 data retrieved from The Walt Disney Company, “The Walt Disney Company Reports First Quarter Earnings for Fiscal 2022.” February 9, 2022.
- Disney+: Includes U.S. and Canada. The Walt Disney Company, “The Walt Disney Company Reports First Quarter Earnings for Fiscal 2022.” February 9, 2022.

Attachment E

Ratings of Top TV Programs



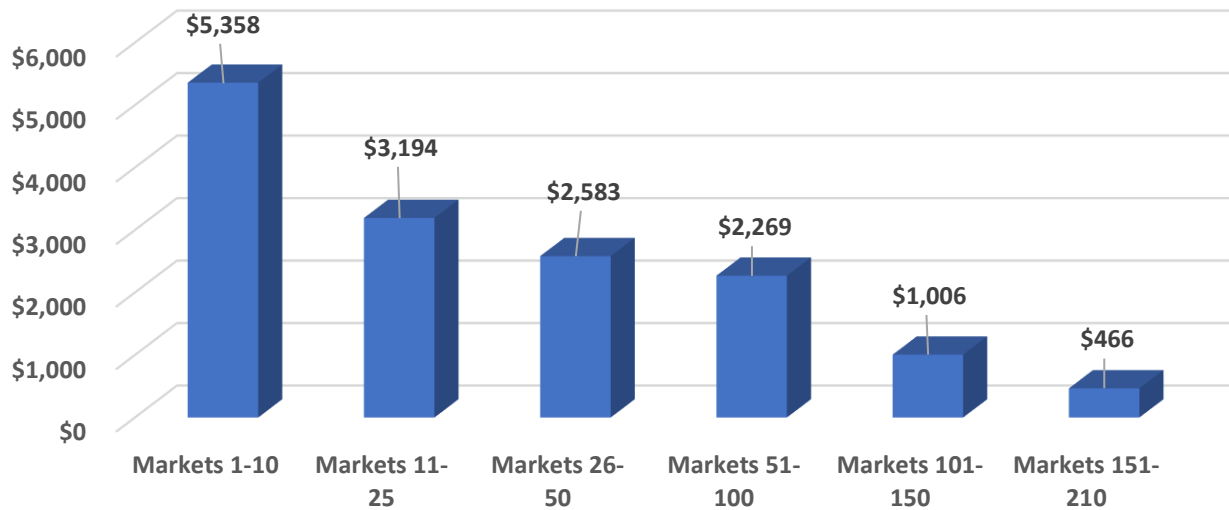
Sources and Notes:

1985-1986, 1996-1997, 2004-2005 Seasons: *Complete Directory to Prime Time Network and Cable TV Shows, 1946-Present*. Household ratings based on Live-Only viewing;
*2020-2021 Season: *Nielsen*, Live +7 Day viewing, September 10, 2020-May 19, 2021. Regularly scheduled program; excludes pre- and post-shows.

Attachment F

The Relationship Between Market Size and Advertising Revenue

**2021 Television Market Revenues
(in millions)**



	Markets 1-10	Markets 11-25	Markets 26-50	Markets 51-100	Markets 101-150	Markets 151-210
Number of Commercial Stations	152	158	205	331	222	160
Avg. Revenue per Station (000)	\$35,250	\$20,214	\$12,602	\$6,855	\$4,531	\$2,911
Avg. Revenue per TV HH in Market	\$145	\$128	\$112	\$99	\$87	\$86

Source: Analysis of BIA Media Access Pro data as of May 24, 2022. Analysis based on full power stations only. Satellites are excluded from analysis.

Attachment G

Economic Impact of Big Tech Platforms on the Viability of Local Broadcast News



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Executive Summary

Radio and television stations' local content – particularly news – provides great value for audiences on the major technology platforms. However, broadcasters are not fairly compensated for this valuable content because of the way the markets currently operate. The reason for that is simple – these tech platforms have substantial market power in their provision of services, and they use that power for advancing their own growth and benefit to the detriment of local broadcast journalism.

Local news produced by local broadcast stations continues to be the most trusted, highly consumed and valued news source. Local news is very costly to produce, and yet its consumption and the advertising dollars that support it are shifting to technology platforms where broadcasters cannot fully recoup their investment or earn the economic benefits they create for the platforms because of unequal bargaining power. This competitive imbalance puts a severe strain on the economics of local broadcasters and threatens their continued investment in local journalism.

- Based on our qualitative research interviewing broadcast group executives and our economic modeling of just a few high economic impact practices of the major tech platforms, we conclude:
 - **No Technology Platform Currently Offers a Viable Economic Model for Broadcast News:** There is no viable revenue model from the technology platforms that pays or enables broadcasters to earn equitable revenue, as shown in our economic models for Google Search and Facebook News Feeds, under their current practices.
 - **Algorithms Do Not Properly Weight Local Broadcast News Value:** The platforms exercise great control of content “reach” and how content is exposed and discovered. Unfortunately, this can result in amplifying misinformation and controversial content.
 - **Broadcast News is Not Properly Identified:** Homogenization in the presentation of broadcaster content is a core issue for stations. Broadcasters invest heavily in their local news brands only to see their premium content surface in search returns and news feeds alongside non-professional journalism, or worse, sites with disinformation.
 - **Under the Guise of User Privacy, Google Gains Even More Market Power:** While Google has recently sought praise for changing their user tracking practices, a deeper dive demonstrates that this is not as clear cut as it seems. Google has announced plans to restrict sharing data with third parties, including other advertisers. They do not intend to cut the use of their own data about consumers, however. This move will make them even more powerful in comparison, consolidating their dominance in interactive advertising to the detriment of broadcasters and other ad-dependent local media.

- **BIA's Economic Models Estimate Significant Loss for Broadcasters**

- Based on BIA's economic models for the value that local broadcasters create for tech platform users but are not able to monetize themselves, examining just Google Search and Facebook News Feed, ***we estimate a total annual loss of value equal to \$1.873 billion.***
- Facebook News Feed lost value: \$455 million with a range of between \$325 million to \$585 million.
- Google Search – zero click lost value: \$1,289 million with a range of between \$921.1 million to \$1,658 million.
- Google Search – improper local news algorithm weighting: \$128.6 million with a range of between \$91.9 million to \$183.8 million.
- The immediate impacts on local broadcasters from other platforms, namely Apple and Amazon, are not yet as dire, but the potential for future harm is likely as these platforms also have immense market power.

Introduction

The rise of the major tech platforms has shifted the paradigm for how local audiences organize, discover and consume the local news they value. This shift creates a market distortion for broadcasters producing local news that limits their ability to fully capture the economic benefits of the content they provide to the tech platforms. Given the market power that these tech platforms enjoy, this creates a severe problem for local broadcasters and challenges the economic foundation for their continued provision of local news and information.

The Pew Research Center produces respected and authoritative trend studies of audience relationships with news media. A [consistent finding](#) is that local TV and radio stations remain leading sources of news for viewers and listeners.¹ Local audiences also trust local broadcast outlets more than any other platform. For example, a TVB-sponsored [survey](#) of registered voters in ten battleground states following the 2020 election found that 73 percent of respondents trusted local broadcast TV news, making it the most trusted news source, with only 33 percent saying they trusted social media.²

The economic structure of the media industry overall and in the distribution and consumption of local news specifically is being restructured with secular shifts by audiences towards more digital media consumption and by advertisers targeting their spending to reach local audiences. Local newspapers have been particularly hard hit with newspapers failing, cutting news staff and losing readership.

Nonetheless, nearly three-quarters (71 percent) of Americans think their “local news media do well financially” even though most do not pay for it themselves. This misperception has been damaging to the local news industry, especially for local newspapers. The tech platforms’ negative impacts on journalism has now reached broadcasting, as the platforms leverage stations’ premium news content without providing commensurate economic benefits that can help sustain local broadcast news.

Recent [research](#) from Pew shows that Americans increasingly prefer digital devices for getting their news.³ Nearly nine in ten Americans (86 percent) get their news from “a smartphone, computer or tablet,” as compared to 68 percent from TV and 50 percent from radio. Print trails at 32 percent. Advertising spending has followed news audiences from traditional to digital platforms.

According to [BIA Advisory Services](#), in 2021 local TV and local radio stations will generate \$15.7 billion and \$12.6 billion respectively in advertising revenue.⁴ However, mobile (\$23.4 billion) and online (\$23.3 billion) platforms collectively will generate over \$46 billion in advertising spending targeting local audiences. The shift toward increased advertising spending on digital platforms will continue through 2024, according to BIA.

¹ <https://www.journalism.org/2019/03/26/for-local-news-americans-embrace-digital-but-still-want-strong-community-connection/>

² “The 2020 Voter Funnel Study,” TVB, <https://www.tvb.org/Public/Political/TheVoterFunnel.aspx>. [Press release](#) issued December 8, 2020.

³ <https://www.pewresearch.org/fact-tank/2021/01/12/more-than-eight-in-ten-americans-get-news-from-digital-devices/>

⁴ <http://www.biakelsey.com/bias-u-s-local-advertising-forecast-2021-reveals-little-growth-across-media-even-without-political-advertising/>

Google (a unit of Alphabet), Facebook, Apple and Amazon are the largest tech platforms in terms of market capitalization and annual revenue. Beyond the economics, these tech platforms also have outsized roles in determining what connections are made between publisher content and audiences. The four leading tech platforms have substantial market power in the relationships they create and mediate between publishers and their audiences.

In this report, we focus on the value that radio and television broadcasters' news and other local content creates for audiences on these platforms that is not fully recognized due to the way these markets currently operate. The tech platforms have restructured the news ecosystem in ways that threaten the viability of local broadcast news.

Major Tech Platform Business Practices Harm Local Broadcasters

The primary goal of this research is to provide estimates of lost revenue or economic harm (direct and indirect) to broadcasters from the business practices of the major tech platform providers. Where feasible, we estimate direct and indirect monetary harm to local broadcasters from the platforms' practices.

The four major tech platforms we examine in this study are **Google** and **Facebook**, along with **Apple** and **Amazon**, because of their market dominance in setting the terms for distributing and monetizing digital content over the Internet.

The Rise of the Tech Platforms is Hurting Local News Ecosystems

Tech Platforms Create Marketplaces

Tech platforms create economic value for producers and consumers by hosting and supporting a distribution pipeline in a two-sided marketplace. At their best, tech platforms bring efficiency and support value creation for both producers and consumers while providing a neutral transactional venue. However, the current tech platforms have created a less than ideal environment for promoting competition or enhancing consumer value.

To get a sense for how tech platforms operate, consider this conclusion based on the Geoffrey Parker et al. study of network effects and the rise of the tech platforms, [Platform Revolution](#)⁵:

When platforms grow big enough, they have the potential to cease being mere participants – serving to match existing supply with existing demand – and actually begin manipulating individual users and even entire markets through their great size and reach.⁶

⁵ Geoffrey G. Parker, et al., *Platform Revolution: How Networked Markets are Transforming the Economy and How to Make Them Work for You*. W.W. Norton & Company. 2016, page 5.

⁶ Parker et al., *Platform Revolution*, page 251.

How Tech Platforms Hurt Competition

What has transpired with the four tech platforms considered in this study – Google, Facebook, Apple and Amazon – is that they have become more than neutral platforms and distribution pipelines. They have grown beyond their roles of “enabling value-creating interactions between *external producers* and consumers”⁷ by becoming their own *internal producers*.

This changing role enables the tech platforms to increase their own value by controlling participants in their platform marketplaces where they control the governance and resulting value creation and capture in ways opaque and harmful to external producers. More specifically, the tech platforms enable and compete with other producers for audience and advertising dollars and do so based on terms they create to favor themselves, such as with their use of local broadcasters’ news content. In short, the tech platforms are using unfair data and technology advantages from their own platforms to outcompete the other players they host on their platforms, including local TV and radio stations.

The big tech platforms essentially have restructured the media and news functions in society. They have hit local broadcasting where it hurts most, in its ability to produce and serve audiences with quality journalism and generate advertising revenue to maintain viability and competitiveness in the market.

The Tow Center for Digital Journalism issued results from its continuing research into the evolving relationship between news publishers and the tech platforms. Publishers need the tech platforms to get to market. The tech platforms need the quality journalism provided by publishers to attract and engage users to their platforms and services.

The Tow Center’s report, [FRIEND & FOE: The Platform Press at the Heart of Journalism](#) concluded that: “This evolving publisher-platform partnership is unequal, however.⁸ Platforms wield more power over formats and data and earn significantly more advertising dollars in aggregate than publishers, even as platform choices increasingly inform publishers’ editorial strategies, distribution strategies and workflows.”

Advertising revenue is the lifeblood of local broadcasting and supports local news production, both on-air and in digital forms. The pandemic accelerated an already growing trend towards more advertising on digital platforms, with [over half](#) of all U.S. ad spending being spent on digital ads in 2020 (and with nearly two-thirds of all digital advertising dollars being spent on Google, Facebook and Amazon alone).⁹

According to the [Wall Street Journal](#), this milestone is “just the latest proof of digital advertising’s meteoric rise, a development that has concentrated ad spending with several tech giants at the expense of other platforms, including newspapers, local television and magazines.”¹⁰ And an [analysis](#) by major ad agency GroupM similarly concluded that, “The growth in online advertising last year came as every other kind of ad spending shrank, with double-digit declines in television, newspapers and billboards.

⁷ Parker et al., *Platform Revolution*, page 5.

⁸ <https://academiccommons.columbia.edu/doi/10.7916/d8-15pq-x415>

⁹ <https://www.wsj.com/articles/google-facebook-and-amazon-gain-as-coronavirus-reshapes-ad-spending-11606831201>.

¹⁰ Google, Facebook and Amazon Gain as Coronavirus Reshapes Ad Spending,” *Wall Street Journal*, December 1, 2020. <https://www.wsj.com/articles/google-facebook-and-amazon-gain-as-coronavirus-reshapes-ad-spending-11606831201>.

And those online gains flowed heavily to the tech giants rather than to digital media sites and publishers that sell online ads.”¹¹

The [Wall Street Journal](#) also has noted that the “Internet platforms have long been interested in news as a way to engage users,”¹² but have been less eager, especially in the absence of regulatory pressure, to compensate news publishers for using their content. The platforms’ use of broadcasters’ and other local media’s news content is in fact disrupting the provision of local news and information. Market disruptions in local journalism can have outsized consequences for American society and democracy.

This all adds up to an urgent problem for policymakers to consider as they weigh the paradigm shifts in the local news ecosystem and its ability to continue producing and distributing highly valued content.¹³

Sizing the Tech Platforms

Of the four tech platforms we studied, only Facebook falls just short of reaching a trillion-dollar market capitalization (Figure 1). Each company has its core strength: Google in search, Facebook in social, Apple in devices and apps, and Amazon in ecommerce and video.

The most recent earnings reports from these companies boasted revenue, growth and profit numbers that greatly exceeded Wall Street’s expectations, leading one media business report to [conclude](#) that the “tech giants show no sign of slowing down.”¹⁴

By comparison, the local broadcast industry is much smaller than the four big tech platforms. When comparing these platform companies to four of the largest pure-play local TV groups in terms of market cap (April 30, 2021 market close) we can see the figures and comparative bubble chart in Table 1.

For the bubble chart, ***the combined market cap of these four TV groups is the size of the period at the end of this sentence and does not even appear in the data plot.***

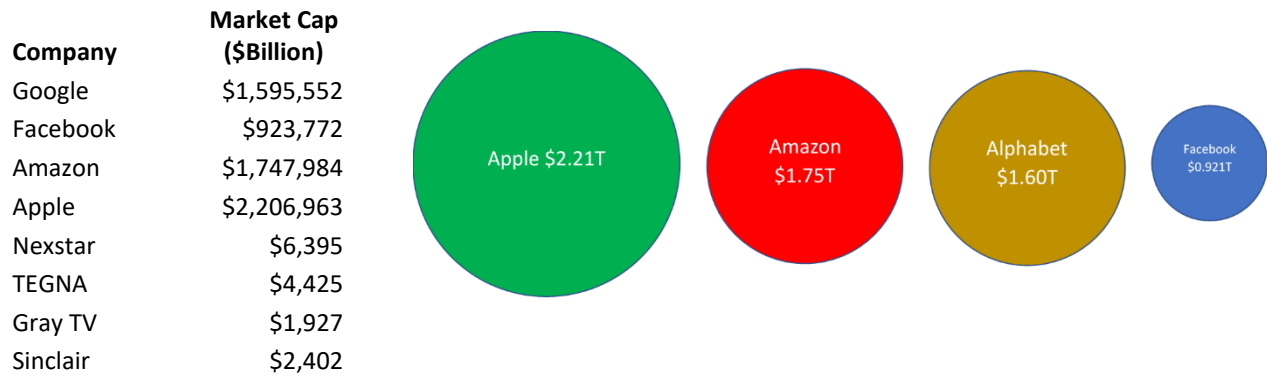
¹¹ <https://www.wsj.com/articles/how-covid-19-supercharged-the-advertising-triopoly-of-google-facebook-and-amazon-11616163738>.

¹² “Google, Facebook, Amazon, Apple and Microsoft. Call Them Tech Frenemies for Life.” Wall Street Journal, April 1, 2021. <https://www.wsj.com/articles/tech-giants-cooperate-while-competing-frenemies-for-life-11617293819>.

¹³ For example, a [2018 Notre Dame-UIC study](#) examined the relationship between the loss of print news and municipal bond ratings, due in part to lack of coverage and exposure of local government inefficiencies.

¹⁴ Sara Fisher, “Tech Giants Show No Sign of Slowing Down,” Axios, April 30, 2021. https://www.axios.com/big-tech-earnings-apple-facebook-microsoft-amazon-4f0c98fd-28ab-497a-91f8-bdc61fb6c3de.html?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axioslogin&stream=top.

Table 1. Comparing Market Caps of Big Tech and Local TV Groups

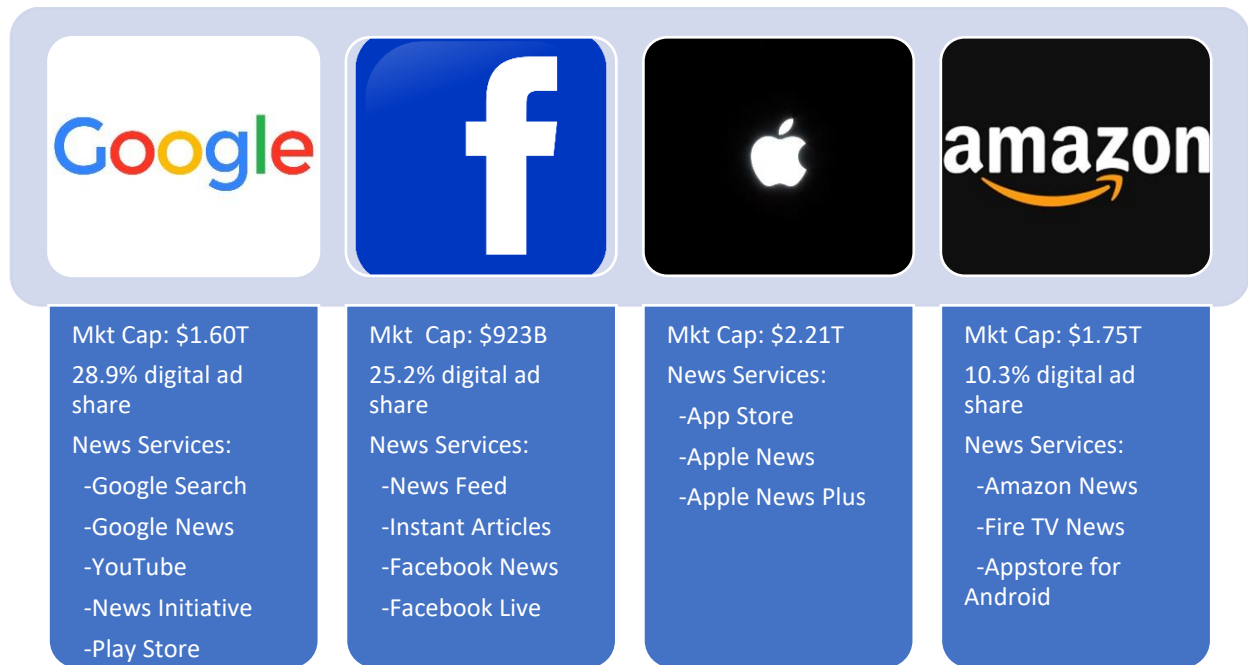


Source: BIA Advisory Services and market caps as of market closing on April 30, 2021.

In search of higher user satisfaction and engagement, and revenue growth from ad-supported and premium digital news services, each of these tech platforms has become a significant player in the digital news ecosystem.

Existing news publishers, including local broadcasters, have been forced by practical circumstances to adapt to the business models used by the tech platforms due to the market power of these platforms. The platforms are simply too big to just walk away from or try to ignore. These business models are changing the face and the economics of the digital news marketplace. For broadcasters, the tech platforms’ reshaping of the news marketplace imposes hefty penalties that impedes their abilities to produce high quality local news.

Figure 1. Tech Platforms Market Cap and News Services



Sources: BIA compilations, digital ad shares from eMarketer, April 2021. Market caps are as of 4/30/2021.

These tech platforms also play both sides. They operate as massive gateway *platforms* hosting two-sided markets for content discovery and distribution, and they operate as *participant* publishers with their own aggregations of third-party content.

For broadcasters seeking to reach and serve audiences in the digital domain, agreeing to terms to distribute and monetize premium broadcast news content across these platforms is a business necessity.

Each of the major tech platforms has its own business models for dealing with broadcasters and their news content. In each case, the primary path to monetization for broadcasters is generating referred traffic to their websites and apps where they can serve ads. Some of that advertising revenue could be shared between broadcasters and the tech platforms according to varying, often complicated and typically non-negotiable terms.

For example, broadcasters can directly sell ads on their websites and keep 100 percent of the gross revenue but must pay ad tech fees from those proceeds. If broadcasters have ad inventory sold on Google AdX ad exchange, Google keeps 10 percent of the gross revenue in addition to the ad tech fee for platform services.

An [analysis](#) of Google ad tech fees across its ad platforms including DV360, Google Ads and Google Ad Manager concluded that, “When an advertiser’s \$1 in media spend starts and ends with Google, publishers receive 69 percent of every dollar. Google takes the other 31 percent, according to 2019 aggregate data...The ad network charges advertisers on a cost-per-outcome basis but pays publishers on a CPM basis, so the average varies.”¹⁵

During 2020, the key impact year of the pandemic and a major political election year, news consumption rose dramatically. According to [research](#) from the Pew Research Center, 18 percent of U.S. adults said the “most common way they get their political and election news” is from social media such as Facebook and YouTube, compared to 16 percent for local TV and 8 percent for radio.¹⁶ A quarter (25 percent) of U.S. adults got their political and election news most commonly from news websites or apps.

The tech platforms including Facebook and Google’s YouTube do not produce local news, but they do serve vital market functions in the discovery and distribution of news content served to their audiences along with revenue producing ads they sell.

When considering the value of broadcast news content to the tech platforms and their users, quality matters significantly, and broadcasters adhere to high standards of journalistic integrity. This quality in broadcast news content results in value creation for the tech platforms that is not fully captured in user traffic and advertising metrics.

Broadcasters and other news publishers go to great lengths to produce premium quality news content. Further, original reporting often comes at great peril to the physical well-being of reporters. According to [recent research](#) from the Radio Television Digital News Association, “20% of television news directors said that their employees experienced attacks in 2020. 86% of these directors said that they had taken

¹⁵ <https://www.adexchanger.com/platforms/google-opens-its-black-box-and-shares-fees-across-dv360-google-ads-and-google-ad-manager/>.

¹⁶ <https://www.journalism.org/2021/02/22/americans-who-mainly-got-news-via-social-media-knew-less-about-politics-and-current-events-heard-more-about-some-unproven-stories/>

steps to protect employees, including purchasing bulletproof vests and gas masks and sending security teams with reporters.”¹⁷

Recently, there has been much consideration of these tech platforms and local news issues around the world. The U.S. can learn from these initiatives. For example, the [Digital Platforms Inquiry](#) report from the Australian Competition and Consumer Commission (ACCC) highlighted that, “The content produced by news media businesses is also important to digital platforms.¹⁸ For example, between 8 and 14 per cent of Google search results trigger a ‘Top Stories’ result, which typically includes reports from news media websites including niche publications or blogs.”

With such broad use of tech platforms’ social media, news sites and apps, broadcasters cannot rely solely on their over-the-air platforms for providing news to their audiences. They must go to where audiences are and provide digital news services. And to get the broadest distribution and largest opportunities to monetize their news content, broadcasters must come to terms with the tech platforms to access their user bases.

Tech platforms offer both vital distribution scale and monetization options for broadcasters seeking to serve audiences and recoup their deep investments in high quality journalism. Because of the terms with which they must comply, and how frequently those terms change, broadcasters often feel their ROI (return on investment) from their collaborations with tech platforms does not reflect their true value to users.

Local Broadcast Digital News Content and Maintaining Viability

Broadcasters make their ad-supported digital news content available for free to audiences who visit their stations’ websites or use their mobile applications (apps). These websites and mobile apps often are referred to as owned and operated (O&O) digital assets, as they are under the direct control of the stations. The ad revenue local broadcasters can achieve for their digital news content is critical to the viability of these services.

Local broadcasters offer premium content, and when audiences opt in through broadcast news websites and mobile apps, the content and ads can be tailored more appropriately. Broadcasters also publish their proprietary content on third-party websites and apps including Google Accelerated Mobile Pages (AMP), Facebook sponsored pages, Facebook Instant Articles, Amazon Fire News and Apple News.

Stations’ digital news content includes video, audio and text. The digital news may have been broadcast in whole or part over the stations’ airwaves. In some cases, the digital news content may be unique to digital distribution channels as more broadcast news operations adopt “digital first” news strategies for best serving the needs of their audiences.

¹⁷ <https://www.poynter.org/business-work/2021/1-in-5-local-tv-stations-reports-attacks-on-journalists-in-2020-survey-finds/>

¹⁸ <https://www.accc.gov.au/system/files/Digital%20platforms%20inquiry%20-%20final%20report.pdf>

Tech Platform Terms to Broadcasters Often Are Not Negotiable

To do business with the tech platforms and the range of services they offer on their platforms, broadcasters must comply with a myriad of terms before they can distribute their local news products. The tech platforms have a collection of services that broadcasters may opt into. Some of these services offer revenue share opportunities. Each service has a set of terms and conditions with which broadcasters must comply.

The range and diversity of tech platform services and associated terms, conditions and business models are both complicated and evolving. We summarize a range of platform services, terms and revenue sharing available to publishers including local broadcasters in Appendix A: Tech Platform Terms and Revenue Share Policies.

Broadcasters have three basic models to develop paths to revenue for their news content with the tech platforms: distribution agreements or licensing, subscription and advertising.

- *Distribution Agreements*: The Amazon news app on Fire TV is an example of a distribution agreement this tech platform has with several major TV groups. Google recently [announced](#) \$1 billion in distribution deals with over 600 publishers globally to be part of their Google News Showcase platform.¹⁹
- *Paid Subscriptions*: Apple News Plus and Google News are examples of how news publishers can collaborate with the tech platform to monetize content via paid subscriptions from which there is a revenue share between the platforms and publishers. For example, Apple News Plus typically shares 70 percent of subscription revenue with news publishers but in some cases that rises to 85 percent.
- *Direct Sold and Remnant Ad Inventory*: The third content revenue model is monetization via advertising. “Ad inventory” basically refers to some measure of user traffic or engagement associated with publisher content. For example, using a cost per thousand (CPM) model, publishers charge for ads based on the thousands of user impressions they deliver to an ad buyer. If a publisher charges a \$10.00 CPM, every time they deliver 1,000 impressions to an advertiser, they earn \$10.00. In other ad models the currency metric could be Click-Through Rate (CTR), Call-To-Action (CTA), or several other options. For CPM models, ad buyers are charged for impressions served to the user on their screen. For CTR, the user must click on the ad for the publisher to earn revenue. And for CTA, the user must do something, such as fill out a form, for the publisher to generate revenue. Publishers generate ad revenue from their digital news assets (websites and mobile apps) either by directly selling that ad inventory with their own efforts or allowing the tech platforms to fill publishers’ remnant (i.e., unsold) ad inventory with their programmatic exchanges.

In addition to revenue-sharing terms with the tech platforms, as we highlight below, news publishers must agree to a range of terms including journalistic content policies; formatting requirements for news and ad content; and producing or hosting content on the tech platform servers versus publisher services

¹⁹ <https://brandequity.economictimes.indiatimes.com/news/digital/google-says-not-up-to-us-to-dictate-how-news-companies-spend-its-1-billion/81814988>

for superior user experiences in faster content loading and rendering, particularly for mobile users (e.g., Google AMP and Facebook Instant Articles). In some cases the tech platform terms demand that the broadcaster use that tech platform's ad server. These terms are take it or leave it with no negotiation, where the broadcaster only has the option of "click to accept" on a standardized publisher agreement.

Focusing on Google and Facebook

At this writing, Google and Facebook are the most consequential of the big four tech platforms for assessing the continued viability of local broadcast news in today's digital environment. Based on BIA's broadcast group executive interviews, it quickly became clear that Google and Facebook occupy much of these executives' current focus in terms of producing and monetizing their digital news content. Thus, for our purposes of investigating how major tech platforms are disrupting the local news ecosystem and distorting how local broadcasters create value versus their ability to monetize that value and maintain on-going viable news operations, focusing on Google and Facebook is a priority.

It is also clear, particularly with recent initiatives such as Apple News, Apples News Plus and Amazon's Fire TV News platforms, that Amazon and Apple will have increasingly strong impacts on the economics of local broadcast journalism in the near future.

Apple News and the Apple Search Ads (ASA) platforms will see strong growth, according to equity analyst firm Cowen & Company. Cowen [concludes](#), "Apple News+ had about 11 million paid subscribers in 2020, generating revenue of about \$550 million."²⁰ Going forward, Sankar believes that "Apple News+ could reach 19 million subscribers by 2023. That could rake in \$1.14 billion in subscription revenue and \$1.02 billion in digital ad revenue from ad impressions, resulting in a total of \$2.2 billion."²¹

Sandeep Gupta, vice president of Amazon Fire TV, [recently said](#), "Adding access to local news is the latest step in our commitment to helping our customers stay informed. We've been amazed by the popularity of Amazon's news app and view local news as the next indispensable piece for our customers."²² As of March 18, 2021, [Fire TV provided](#) local news from 88 markets based on distribution agreements with leading local TV station groups.²³

Google

Google is a dominant actor in the digital advertising market at all levels including participating in the demand, supply and content aggregation components of the ecosystem. Google's primary revenue comes from Search and Display advertising networks.

²⁰ <https://appleinsider.com/articles/21/04/06/apple-news-could-reach-19m-subscribers-22b-in-revenue-by-2023-analyst-says>

²¹ <https://appleinsider.com/articles/21/04/06/apple-news-could-reach-19m-subscribers-22b-in-revenue-by-2023-analyst-says>

²² <https://mspoweruser.com/amazon-local-news-channels-to-news-app-on-fire-tv/>

²³ <https://www.theverge.com/2021/3/18/22337922/amazon-fire-tv-free-local-news-streaming-app>

Google operates on both the “buy-side” and “sell-side” of the advertising market. Given its buy-side and sell-side data, or what is called in the industry “bidstream data,” Google has the means, motive, and opportunity to manipulate ad bid pricing. Bidstream data is used by ad buyers and sellers to negotiate and settle on terms in real-time auctions using Google and other ad platforms.

Given the outsized role of Google’s advertising platforms, broadcasters must source demand for their ad inventory through Google’s ad platforms or risk their access to a huge source of demand and resulting substantial loss of revenue. In other words, if broadcasters do not expose their ad inventory on the Google ad exchange, they will miss access to a significant number of advertisers (i.e., Supply Side Platform – SSP) demand and likely receive lower prices for their ads. Nexstar’s experience as reported in the [Wall Street Journal](#) highlighted what happens when broadcasters opt out of participating in Google’s AdX – an immediate and severe revenue decline.²⁴

Another way Google can punish publishers is by ranking them lower in search results. As reported by the [Wall Street Journal](#), a recent antitrust suit by the Daily Mail against Google’s parent (Alphabet) alleges that “the tech giant manipulates search results and advertising auctions in ways that harm online publishers...Google punishes publishers in search rankings if they don’t sell enough advertising space through Google’s marketplace.”²⁵

In an antitrust suit filed by Texas against Google, it [was alleged](#) that “Google used its access to data from publishers’ ad servers—where more than 90% of large publishers use Google to sell their digital ad space—to guide advertisers toward the price they would have to bid to secure an ad placement.”²⁶ The complaint concluded that Texas charges Google’s “Project Bernanke” allowed it to “unfairly compete against rival ad-buying tools and *pay publishers less on its winning bids for ad inventory.*”²⁷

For broadcasters to have their content discovered, the Google search platform is unquestionably where their digital news must be accessible and prioritized in Search Engine Results Pages (SERPs). Once users click on a link in a search return that brings them to the broadcaster’s site, broadcasters can place display ads in their news content which they may sell through Google’s ad exchange.

The three major Google programs for publishers are Ad Manager, AdSense and AdMob. Details for each program [can be found here](#).²⁸

Here is a summary of how Google describes each solution:

- **AdSense:** “AdSense acts as an ad network, providing you access to demand from advertisers and helping you set up your ad inventory. AdSense is best for publishers who want more automation for their ad solutions, and have a small, dedicated ad management team.”

²⁴ https://www.wsj.com/articles/how-google-edged-out-rivals-and-built-the-worlds-dominant-ad-machine-a-visual-guide-11573142071?mod=article_inline

²⁵ <https://www.wsj.com/articles/daily-mail-owner-files-antitrust-suit-against-google-11618925778>

²⁶ <https://www.wsj.com/articles/googles-secret-project-bernanke-revealed-in-texas-antitrust-case-11618097760>

²⁷ <https://www.wsj.com/articles/googles-secret-project-bernanke-revealed-in-texas-antitrust-case-11618097760>

²⁸ <https://support.google.com/admanager/answer/9234653>

- **AdMob:** “AdMob is a mobile ad network and monetization platform for mobile developers who want to earn money from ads, gain actionable insights, and grow their app business. As a network, AdMob allows you to monetize your mobile apps by helping you serve ads globally. As a monetization platform for developers who work with multiple ad networks, AdMob helps you maximize ad revenue across all of your third-party network partners.”
- **Ad Manager:** “Google Ad Manager is an ad management platform for large publishers who have significant direct sales. Ad Manager provides granular controls and supports multiple ad exchanges and networks, including AdSense, Ad Exchange, third-party networks, and third-party exchanges.”

Beyond these advertising revenue terms and policies, broadcasters collaborating with Google must agree to other terms as publishers including:

- [Google News Policies](#)²⁹ speaks to how Google strives “to make it easy for users to find news from publishers that consistently produce independent and original work, containing a significant source of fresh, original and purposeful content.” Publishers are referred to [Google’s Webmaster Guidelines](#)³⁰ and other news policies with which they must comply to be on Google’s news platforms and surfaces.
- [Google for Publishers](#)³¹ provides an overview for how publishers can earn money from their online content. The programs include AdSense, Google Ad Manager and AdMob.
- Another document for publishers is Google’s [Understand the Google Publisher Policies and Google Publisher Restrictions](#).³² This document covers Google’s publisher policies and restrictions, including advertising program policies for its AdSense product.
- [Google AMP](#)³³ is a Google component framework to which broadcasters can create content according to AMP specifications for hosting on Google’s servers. The benefit is much faster rendering of content and AMP-specific features in search results, such as higher ratings in mobile SERPs. But broadcasters lose the direct relationship with the news consumer they would have when hosting their own sites, and instead give that over to Google.

Facebook

Facebook is by far the dominant social platform in the U.S., accounting for two-thirds (65.84 percent) of [social media traffic](#) before including its other properties such as Instagram.³⁴ This rises to 70.74 percent of social media traffic on smartphones. Most users access Facebook from their mobile devices, and mobile advertising sales are Facebook’s dominant revenue engine.

²⁹ <https://support.google.com/news/publisher-center/answer/6204050?hl=en>

³⁰ https://developers.google.com/search/docs/advanced/guidelines/webmaster-guidelines?visit_id=637535738292957499-2217624352&rd=1

³¹ <https://www.google.com/ads/publisher/>

³² <https://support.google.com/adsense/answer/10008391?hl=en>

³³ <https://developers.google.com/amp>

³⁴ <https://gs.statcounter.com/social-media-stats/all/united-states-of-america>

Facebook has two monetization platforms: (1) selling ads served in their own News Feeds and other services they offer and (2) sourcing demand from third-parties and placing Facebook ads into those websites and apps via the Facebook Audience Network.

To gain access to the Facebook platform services, broadcast partners must comply with [Facebook Monetization Policies](#)³⁵ and [Content Monetization Policies](#).³⁶

The Facebook Audience Network is the dominant social advertising platform for accessing advertising spending on both Facebook's own feeds and in third-party websites and apps looking to sell ads through Facebook's ad exchange. As Facebook describes this platform service, "Audience Network extends Facebook's people-based advertising beyond the Facebook platform. With Audience Network, publishers can make money by showing ads from Facebook advertisers in their apps." The Facebook Audience Network terms for publishers are [presented here](#).³⁷

Based on our executive interviews with broadcasters, other Facebook distribution opportunities such as Instant Articles and Facebook News are not popular because broadcasters cannot see a viable path forward for their news business models.

Interviews with Local Broadcast Executives About Tech Platforms

Before presenting our estimates of the economic harm to broadcasters due to the market power of the tech platforms, it is important to review the circumstances broadcasters face when dealing with these platforms. Through numerous interviews with broadcasters specifically involved in the delivery and monetization of their digital content, we were able to determine some of the key issues they face.

Here is a summary of representative comments we obtained in our executive interviews across several topic areas.

Tech Platforms Terms – Fair Market and Negotiability

- **Fair Market and Negotiability:** "Here's the high-level point. The vast majority of our interaction with the tech platforms is whether or not to click on a checkbox on a page. There is no paper between us and Google. Just a click on some dashboard that gives Google the right to use our content."
- **Platforms Dominate in Scale and Scope, Broadcasters Must Play:** "Google is so integrated, they have it all. We can't afford not doing business with them." One digital broadcast executive called out that Google has Google News, YouTube and a programmatic ad business that runs on both the DSP (Demand Side Platform) and SSP (Supply Side Platform), all at massive scale.
- **Platforms' Attitude Is that Broadcasters Do Not Matter, Users Do:** "The only way for broadcasters to work with Facebook and Google is with government action. Broadcasters do not matter to Google and Facebook."

³⁵ <https://www.facebook.com/business/help/169845596919485?id=2520940424820218>

³⁶ <https://www.facebook.com/business/help/1348682518563619?id=2520940424820218>

³⁷ https://www.facebook.com/ads/manage/audience_network/publisher_tos/

- **Broadcasters Have Trouble Getting Heard by Tech Platforms:** A major group digital leader pointed out that while groups and their local stations are major players in the media ecosystem, they are like mom-and-pop businesses to the tech platforms. Even top broadcast groups do not seem to be big enough to warrant serious attention.
- **Platform Terms Are a Mixed Bag:** Given the scale at which the platforms operate in terms of generating referred audience traffic and ad revenue, all the broadcasters we interviewed concluded that to remain competitive in the marketplace, they had to accept the terms offered by the platforms. Broadcasters must enter deals with the platforms to achieve audience development goals and remain viable as local news operations. Referred traffic from Google and Facebook can often reach 50 percent or more of total traffic to broadcast sites and apps.
- **Appeals Process Is Unilateral and Not Transparent:** Platform terms and conditions are complicated, changing and violations can be immediate and harsh. Broadcast executives told us that their stations sometimes get flagged and penalized by the platforms. The ability to appeal is going to a web page and completing a form. There is no negotiation or understanding of exceptions.
- **Platform Terms Create Higher Cost Structures for Broadcasters:** The terms set forth by the tech platforms to broadcasters include content rendering and hosting, ownership and access to key data, programmatic ad exchanges and pricing, policies related to acceptable editorial and advertising content, and a variety of other special terms and conditions.
- **Algorithms Are Complex, Opaque, Change Constantly and Can Cause Negative Value Impacts:** “Algorithms are black boxes and changes are not communicated to us but often have negative consequences.” “Algorithm changes lead to less referral traffic for us. That means less targetable impressions, less to sell and we become less competitive.” Broadcasters are forced to live and die by algorithms they cannot see or influence.

Tech Platform Versus Broadcaster Valuation Metrics and Performance

- **We Only Make Money from Links Back to Our Sites, Not the Platforms:** “Our number one grievance is that we are getting paid only for links to our sites and apps where we can serve ads. We don’t get fair credit for the value we create for the platforms.”
- **Zero Clicks Mean Platforms Get Value but Broadcasters Do Not:** Often a Google search return or a Facebook shared link can contain enough content from a broadcast news item that the user feels adequately informed by the search return or social post without clicking through to the station’s web site or mobile app where that user could be served ads and monetized. This phenomenon is known in the industry as “zero click.”
- **Facebook Click-Through-Rate:** “We went through a third-party vendor to analyze link clicks from Facebook. We looked only at Linked Posts. Based on 1-month of data, the assumed CTR came out to be 3.5 percent.” This means that most of the broadcaster content appearing in Facebook News Feeds has no chance of being monetized even though users find local news to be valuable.
- **Video Has High Value but No Monetization:** “We have to have video to get ranked high. But the monetization for our most valuable content isn’t there.” “We put video on Facebook. We have to or lose rank. But there is no monetization for us.”

- **Video Publishers Are Not Making Money with the Platforms:** Under non-disclosure, BIA was informed that a major consulting firm was hired to meet with publishers to analyze relationships and economics with one of the major video platforms. Confirming the publishers' suspicion, the study concluded it was a losing proposition to produce and try to monetize video on the tech platform. Not one of the publishers was earning a profit given the expenses required to participate.
- **Broadcast News Providers Are Key Part to the Digital Ecosystem:** "We are digital news providers - a key part of the digital ecosystem. We create awareness but don't get the benefit. Google and Facebook do. We might be the news source, but the traffic flows to Google and Facebook."
- **Local Broadcasters Enhance Value of Tech Platforms with Local News:** "We are a premium local news publisher bringing reliable and reputable news. We are a trusted brand in the community. That brand helps build value for the tech platforms."
- **Does Facebook Know We Are a TV News Station?** "We're trying to find out if Facebook knows, and appropriately ranks, content from our stations when they use branding other than their call letters."
- **Broadcasters Need Google AdX to Create Ad Inventory Value on Their Own Sites and Apps:** Google's Ad Exchange (AdX) is a predominant advertising marketplace where digital ad inventory is bought and sold and creates demand and sets pricing for third-party sites.
- **Facebook Instant Articles, News Tab Have Low Value to Broadcasters:** "Most of our stations don't do Instant Articles. It's extra work and the costs aren't worth it." "No one uses the Facebook News Tab. It's a waste of our time. It's the News Feed that gets all the use." "Facebook is a lost cause for us, just wasted effort. We spent a lot of time analyzing data and trying to figure out the algorithm."
- **We Make No Money on Apple:** "For Apple, we make no money. We get no referrals. We get no data from the App Store." "A lot of stations do development with Apple but for no return. Apple doesn't see the value." "Apple News is minimal. We're not doing anything." "I tell my local stations to do nothing with Apple News. Nothing there for us, they get all the value."
- **Amazon Alexa Can't Be Monetized:** "We can't monetize Alexa. We build apps for smart speakers but there's no revenue."

Economic Model: Tech Platforms' Monetization of Broadcaster Content

As part of the value-producing ecosystem of these platforms, broadcasters provide news and information content to platform users typically in the form of search results (Search Engine Results Pages – SERPs) in Google's case and links provided in Facebook's News Feeds.

The core value of this content is it enables the tech platforms provide relevant and timely information to their users using artificial intelligence, machine learning and data science. This content is prioritized and selectively served to users based on highly complex and constantly changing proprietary and opaque algorithms.

The tech platforms surface relevant information to users with brief content summaries and links to deeper content either on their own assets (i.e., Google AMP, Facebook Instant Pages) or via external

referral links to third-party sites such as those operated by broadcasters. When users click on these external links and land on broadcasters’ websites and apps, broadcasters benefit from generating advertising revenue from these user sessions.

Unfortunately, the CTRs are not high, as many users find the information provided with the links on these platforms sufficient. Hence, almost all the value and revenue generated from this broadcaster content on these tech platforms is not realized by broadcasters, but is retained by the platforms.

Data obtained from several top broadcast groups, along with other publicly available information, enables us to estimate the amount of revenue generated by these tech platforms from this broadcaster content. In the models that follow some numbers are rounded.

We then analyzed a reasonable payment to the broadcasters for this content, depending on the appropriate allocation between the tech platforms and the originator of that content (i.e., the broadcasters).

Facebook News Feed Value Model

- Facebook utilizes the content from local broadcasters through its News Feed service. Links to the broadcaster websites include information that the broadcaster has created on local news items. Facebook sells advertising accompanying that news feed that includes that broadcaster content.
- To estimate the amount of advertising revenue, we obtained information from several of the top broadcast groups as to the number of times their content is seen on Facebook and the number of times that Facebook users click through to the stations’ websites and apps. Along with publicly available information on the rates that Facebook charges, we can estimate an appropriate amount that Facebook should be paying broadcasters for their content which generates revenues for Facebook. That model is shown in the table below.

Table 2. Estimation of Facebook Revenue from Broadcaster Content

Facebook Model Steps	
1. Station Monthly Impressions from Facebook per Person 18+	0.5138
2. Assumed CTR from Facebook	3.5%
3. Monthly Facebook Impressions Just Reading User Feed Content per Person 18+	14.17
4. Average Facebook CPM	\$ 8.85
5. Average Number of Posts in News Feed Between Sponsored Posts	3
6. Facebook Monthly Revenue from Station Content in News Feed per Person 18+	\$ 0.04
7. Facebook Yearly Revenue from Station Content in News Feed per Person 18+	\$ 0.50
8. Number of News Producing TV and radio stations Per Market	5
9. Total 18+ Population	259,249
10. Facebook Yearly Revenue from Station Content in News Feed (\$000s)	\$ 650,000
11. Distribution of Attributable News Feed Revenue to Stations	70%
12. Missing payment for News Feed Content to Stations (\$000s)	\$ 455,000

Explanation of Facebook Model by Step:

1. Using the actual number of impressions various broadcasters receive from Facebook reported to us, we estimate the number of impressions per month for the 18 and older populations served by these broadcasters.
2. This Click-Through-Rate (CTR) was provided by the broadcasters and was quite similar between the various broadcasters that provided us with information.
3. This number of impressions are the estimated number of News Feed impressions from broadcasters that the user did NOT click through to the station website (Step 1 divided by Step 2 minus Step 1).
4. This is the average for Facebook CPMs across the four quarters of 2019. (Source: "Paid Media Q1 2021 Benchmark Report," ADStage, p.7).
5. This is an average number of posts between sponsored posts in the News Feed.
6. This is a calculated value of the monthly revenue that Facebook is generating from the broadcaster content included in the News Feed that the user does NOT click through to the stations' websites. (Step 3 is multiplied by Step 4, divided by 1,000, and then divided by Step 5).
7. This is a calculated value of the annual revenue that Facebook is generating from the broadcaster content included in the News Feed that the user does not click through to the stations' websites. (Step 6 is multiplied by 12).
8. This is the number of local TV stations within each market providing news content. This varies by market (e.g., large markets have more than 5 stations, smaller markets have less than 5) and includes the local television stations with news operations as well as the local radio stations airing news,³⁸ talk,³⁹ and sports⁴⁰ and other formats that include local news and information.
9. Total 18+ Population for 2019. (Source: Woods Poole Economics).
10. This is a calculated amount of the estimated annual amount that Facebook is generating from the broadcasters' content included in the News Feed that the users do NOT click through to the stations' websites. (Step 7 is multiplied by Step 8 multiplied by Step 9).
11. Assumed distribution between Facebook and broadcasters for the revenues generated by Facebook from broadcaster content.
12. This is a calculated amount of the amount that Facebook would remit to broadcasters for the use of their content. (Step 10 is multiplied by Step 11).

As shown in the model above, Facebook generates a considerable amount of user value and revenue from the content that broadcasters provide. The exact amount of revenue depends on the number of factors mentioned above (e.g., number of posts between sponsored posts in the News Feed, share of revenue distribution between Facebook and the broadcasters, etc.). Changing some of those inputs leads to a range of between \$325 million to \$585 million, with the \$455 million shown above in the middle of that range.

³⁸ According to BIA's Media Access Pro database of all radio stations, there are 929 radio stations airing news programming in the U.S.

³⁹ According to BIA's Media Access Pro database of all radio stations, there are 316 radio stations airing a talk format.

⁴⁰ According to BIA's Media Access Pro database of all radio stations, there are 686 radio stations airing a Sports format in the U.S.

Google Search and Zero Click Value Model

Google Search is another important platform which utilizes broadcaster content. Much like Facebook’s News Feed, broadcaster content appears with short summaries in Google search results. These summaries provide substantial value for users looking for relevant search returns to the point that many do not click through to the stations’ websites as a result.

In the search industry, this phenomenon of Google search returns providing enough information so that users do not click through are called, “Zero Click” searches. According to one study by [SimilarWeb](#) in 2020, two-thirds (64.82 percent) of Google searches were zero click searches, i.e., a search that “ended without a click to another web property.”

As SimilarWeb concludes, “Zero-click searches may mean that users’ queries are resolved right on the results page. By displaying ads or its own products, Google can extract value from zero-click searches, while other sites might not. This can be especially troublesome considering Google sources much of the content that appears on its results pages from publishers, and as the proportion of zero-click searches increase, publishers may be losing out on traffic.”

For broadcasters we can estimate the value lost due to the zero click problem in news search results, even as Google gains a substantial benefit from that content through advertising revenue.

We estimate that revenue in the model shown in the table below.

Table 3. Estimation of Google Search Revenue from Broadcaster Content

Google Search Model Steps	Average
1. Station Monthly Referrals from Google Text Search per Person 18+ Per Station	0.655
2. Assumed CTR from Google Text Search	7.83%
3. Total Number of Monthly Station Search Zero Click Results Listings per Person 18+ Per Station	7.71
4. Total Number of Yearly Station Search Zero Click Results Listings per Person 18+ Per Station	92.53
5. Total U.S. 18+ Population (000s)	259,249
6. Total U.S. Yearly Number of Station Search Zero Click Results Listings 18+ Population (000s)	23,989,281
7. Total Number of Google Searches 2020 Daily (000s)	3,500,000
8. Total Number of Google Searches 2020 Yearly (000s)	1,277,500,000
9. % Broadcaster News Zero Click Search Result Listings	1.88%
10. Google Search Revenue 2019	\$ 98,100,000
11. Broadcasters Related Content Revenue	\$ 1,842,151
12. Distribution of Google Search Revenue to Stations	70%
13. Payment for Station Content to Stations (\$000s)	\$1,289,506

Explanation of Google Search Model by Step:

1. Using actual number of referrals impressions provided to us by various broadcasters that they receive from Google Search, we estimate the number of impressions per month for the 18 and older populations served by these broadcasters.
2. This CTR from a search results page was provided by some broadcasters and was quite similar to other publishers' CTRs, which tend to be higher than non-search results page CTRs due to the users specifying a particular topic/issue in their search query.
3. This number of Google Search Results are the estimated number of search results from broadcaster content that the user did NOT click through to the station website (Step 1 divided by Step 2 minus Step 1).
4. This is a calculated annual amount of the annual number of search results from broadcaster content that the user did NOT click through to the stations' websites. (Step 3 is multiplied by 12)
5. Total 18+ Population for 2019. (Source: Woods Poole Economics)
6. This is a calculated amount of the annual nationwide total of search results from broadcaster content that the user did NOT click through to the stations' websites. (Step 4 is multiplied by Step 5).
7. This is an average number of daily Google searches (Source: <https://www.internetlivestats.com/google-search-statistics/>).
8. This is a calculated amount of the annual number of Google searches. (Step 7 is multiplied by 365).
9. This is a calculated amount of the percentage of all Google searches attributable to broadcaster content that were NOT clicked through. (Step 6 is divided by Step 8).
10. This is the 2019 value of the revenue generated by Google search (Source: https://abc.xyz/investor/static/pdf/2019Q4_alphabet_earnings_release.pdf?cache=79552b8).
11. This is a calculated amount estimating the value of broadcaster content to Google search revenue total (Step 9 multiplied by Step 10).
12. Assumed distribution between Google and broadcasters for the revenues generated by Google from broadcaster content.
13. This is a calculated amount of the amount that Google would remit to broadcasters for the use of their content. (Step 11 is multiplied by Step 12).

Much like Facebook, Google generates a considerable amount of revenue from the content that broadcasters provide. The exact amount of revenue depends on the number of factors mentioned above (i.e., CTRs of broadcaster content in search results feeds, share of revenue distribution between Google and the broadcasters).

Changing some of those inputs leads to a range of between \$921.1 million to \$1,658 million, with the \$1,289 million shown above in the middle of that range.

Google Search Algorithm and Local News Weighting Value Model

While broadcasters do generate revenue from click throughs in Google Search, many times their search results are ranked very low in the Search Engine Results Pages, and thus, are not clicked through.

This lower ranking is especially disturbing to broadcasters on search topics of local interest (e.g., local weather emergencies, other local news events) because they invest heavily to produce a premium local news product they conclude is not sufficiently recognized and prioritized by Google's search algorithms.⁴¹

If Google would adjust their algorithm when users search on local topics, users would benefit from the localness of the results, and broadcasters would generate more click throughs.

Broadcasters understand that their search rankings are influenced in part by their own Search Engine Optimization (SEO) strategies and therefore devote significant resources to the SEO initiatives to drive high search listing results.

However, Google's search algorithms are numerous, complicated and fast changing. As Google [describes](#) it, "these ranking systems are made up of not one but a whole series of algorithms."⁴² These algorithms and a "rigorous" standards process are described in a 175-page [document](#) produced by Google.⁴³

For broadcasters and others in the SEO business, it is nearly impossible to keep pace with the hundreds of changes Google makes each year to its search algorithms.

The algorithm changes can be very consequential with devastating economic impact to broadcasters. In our broadcast group executive interviews, many referred to a specific period in August-September 2020 where an apparent change in Google's search algorithms led to a roughly 50 percent decline in referred search traffic.

The model below shows the potential impact of a change in Google algorithms that would more appropriately weight the value of local broadcaster produced news in search queries.

⁴¹ A recent study showed that national news outlets tend to dominate SERPs. The authors of that study conclude, "This likely diversion away from local news has the possibility of shrinking the local information environment, which in turn can produce normatively undesirable effects on political and civic behaviour."

https://www.nature.com/articles/s41562-020-00954-0.epdf?sharing_token=MfPYk01P7EPTsmYvgsa58dRgN0jAjWel9jnR3ZoTv0MimfX8OANCMb6lxjJSl-oZO3jLNvOa3cj5hFy4zBHVaKa8ULpeJ5DoMekQC9zu8BSuEt-y2sNm4qWvG2b49cMw9tB51sH4d3pHy1verRBpG--22SD0BjFXc7fq9YYbKY-01AxcW4AHEIoMDMSGgp9jMwz1EVB7WbUKkEPIfuST92zKXcVMXP9IdPpsZW4X4TB5v5YRyHqJ2DDIRpTOJ2xB1hSaD7SxPc6QQDfRxcw_URgPWfDkT4OJarsq7mY9trS8fkYauw8-KThlqq7mR--kqaAyXP0PdXkBjoC72MkWdQ%3D%3D&tracking_referrer=www.washingtonpost.com

⁴² <https://www.google.com/search/howsearchworks/algorithms/>

⁴³ <https://static.googleusercontent.com/media/guidelines.raterhub.com/en/searchqualityevaluatorguidelines.pdf>

Table 4. Estimation of Additional Revenue from Improvement in Google Algorithm Content

1. Station Existing Yearly Referrals from Google per Person 18+	7.15
2. Average Station User Session Revenue	\$0.01984
3. Yearly Advertising Revenue per Person 18+	\$0.14
4. Assumed CTR improvement in from Local Emphasis Algorithm	70%
5. Yearly Advertising Revenue per Person with Improved Local News Weighting in Search Algorithms	\$.24
6. Total 18+ Population	259,249
7. Average Number of Stations Per Market	5
8. Yearly Increase in Revenue from Algorithm Improvements (\$000s)	\$128,646

Explanation of Improved Google Algorithm Model by Step:

1. Using actual number of referrals impressions various broadcasters receive from Google Search, we estimate the number of impressions per year for the 18 and older populations served by these broadcasters.
2. Using actual revenues generated by visits to broadcasters' websites reported to us, we calculate the average revenue per session.
3. This calculated amount is the annual amount broadcasters are generating per population age 18 and over. (Step 2 is multiplied by step 1).
4. This is an assumed increase in the Google search algorithm that would improve the listing of local publishers on local search topics.
5. This is the calculated yearly advertising revenue per person with improved local news weighting in search algorithms (Step 3 is multiplied by Step 4 and added to Step 3).
6. Total 18+ Population for 2019. (Source: Woods Poole Economics)
7. This is the number of local broadcasters within each market providing news content. This varies by market (e.g., large markets have more than 5 stations, smaller markets have less than 5) and includes the local television stations with news operations as well as the local radio stations airing news, news/talk, and sports and other formats that include local news.
8. This is the calculated amount that broadcasters would benefit from an improved Google algorithm that would emphasize local publishers with local search topics. (Step 6 * Step 7 * (Step 5 – Step 3))

The exact amount of increased revenue depends on the improvement in the algorithm. Changing that improvement to either 50% to 100% leads to a range of between \$91.9 million to \$183.8 million, with the \$128.6 million shown above in the middle of that range.

Conclusions

Based on our qualitative research interviewing broadcast group executives and our economic modeling of just a few high economic impact practices of the major tech platforms, we conclude:

- **BIA’s Economic Models Estimate Significant Loss for Broadcasters.** Based on BIA’s economic models for value that local broadcasters create for tech platform users but are not able to monetize themselves for just the examples of Google Search and Facebook News, we *estimate a total annual loss of value equal to \$1.873 billion.*
 - Facebook News Feed lost value: \$455 million with a range of between \$325 million to \$585 million.
 - Google Search – zero click lost value: \$1,289 million with a range of between \$921.1 million to \$1,658 million.
 - Google Search – improper local news algorithm weighting: \$129 million with a range of between \$91.9 million to \$183.8 million.
- **No Platform Currently Offers a Viable Economic Model for Broadcast News:** There is no viable revenue model from the platforms that pays or enables broadcasters to earn equitable revenue as shown in our economic models for Google Search and Facebook News Feeds under their current practices.
- **Algorithms Do Not Properly Weight Local Broadcast News Value:** The platforms exercise great control of content “reach” and how content is exposed and discovered. Broadcasters imperatively rely on the tech platforms to reach and serve their audiences with premium local news content. However, the discovery and presentation of valued local broadcast news content summaries and referred links is subjugated by complex, opaque and rapidly changing tech platform algorithms that are not optimized to properly weight the value of local news content. A [MIT Technology Review](#) article reported that Facebook’s algorithms are designed to increase user engagement including logging in regularly, posting things and viewing, commenting, liking or sharing items in their news feed. The issue is, as the article concludes, “The models that maximize engagement also favor controversy, misinformation and extremism: put simply, people just like outrageous stuff.”⁴⁴
- **Broadcast News is Not Properly Branded:** Homogenization in the presentation of broadcaster content is a core issue for broadcasters. They invest heavily in their local news brands only to see their premium content surface in search returns and news feeds alongside non-professional journalism or even worse, disinformation sites.
- **Under the Guise of User Privacy, Google Gains Even More Market Power:** Broadcasters rely on referred (i.e., in-bound from Google, Facebook) and direct (i.e., users navigating directly to local station websites and apps) for audience development and content monetization. Once on their owned sites and apps, broadcasters optimize users’ news experience to deepen engagement and station loyalty encouraging users to return. Google, Facebook and the other platforms are imposing restrictions on data sharing with third parties, including advertisers, allegedly in the name of privacy, but presumably for competitive reasons. Loyalty conversion and the inability to move audiences from the platform to a place where monetization does occur is severely curtailed by the “zero click” problem that Google and Facebook practices cause for broadcasters.

⁴⁴ Karen Hao, “How Facebook Got Addicted to Spreading Misinformation,” MIT Technology Review, March 11, 2021. <https://www.technologyreview.com/2021/03/11/1020600/facebook-responsible-ai-misinformation/>.

- **Tip of the Iceberg:** In this study, we limited our detailed investigation and quantitative economic model to just three areas where Google and Facebook impact the ability of local broadcasters to produce and earn fair value for their local news. The roles of Amazon and Apple in the local news ecosystem also are increasingly impactful. And even though we looked at Google and Facebook in terms of major and quantifiable impact areas, many of their services and terms beyond the scope of this study have major impacts on local news media. This influence will only grow in the future unless these tech platforms are constrained, most likely by government action.

Appendix A: Tech Platform Terms and Revenue Share Policies

Table 5. Google Platform Services and Broadcaster Revenue Share

Google Platform Service	Broadcaster Revenue Share	Terms
Search Network	No	<ul style="list-style-type: none"> Broadcasters are not compensated by Google when their content appears in the search results. Google sells Google Ads as a source of revenue in Search Engine Results Pages. Google argues that its search returns refer valuable direct traffic to broadcasters' digital news websites and apps where then can monetize these audiences. Broadcasters are challenged by the "zero click" problem with Google Search. This refers to the situation that a Google Search return includes enough publisher content that the user is satisfied without clicking ("zero click") on the Search link to be referred to the publisher site where the publisher's ads can be served from its own site to monetize its content.
AdSense	Yes	<ul style="list-style-type: none"> AdSense is a service that uses Google's contextual content algorithms to insert ads in publisher webpages. Google has two types of revenue shares available to publishers: <ul style="list-style-type: none"> For displaying ads with AdSense for content, publishers receive 68% of the revenue recognized by Google in connection with the service. For AdSense for search, publishers receive 51% of the revenue recognized by Google.
AdMob	Yes	<ul style="list-style-type: none"> AdMob is a Google-owned mobile app ad network that allows broadcasters to monetize their station owned mobile apps. Google shares 60 percent of AdMob revenue with publishers and retains 40 percent.
Ad Manager	Yes	<ul style="list-style-type: none"> Ad Manager: Google describes Ad Manager as an ad management platform for large publishers who have significant direct sales. Ad Manager provides granular controls and supports multiple ad exchanges and networks, including AdSense, Ad Exchange, third-party networks, and third-party exchanges.
Google News	Yes	<ul style="list-style-type: none"> The Publisher Center for Google News allows broadcasters to generate ad revenue or to monetize their content directly (i.e., subscriptions).
Google News Showcase	Yes	<ul style="list-style-type: none"> Google licenses curated content from publishers to provide to Google users for free.
Google News Initiative	Yes	<ul style="list-style-type: none"> The Google News Initiative provides funding and other support to encourage publisher participation on its platforms.
Google Play	Yes	<ul style="list-style-type: none"> Effective July 2021, publishers receive 85% for first \$1M in sales, then 70% of subsequent sales.
Google AMP	Yes	<ul style="list-style-type: none"> Google Accelerated Mobile Pages (AMP) refers not to an ad channel that publishers can monetize but rather to an open web component framework initiative that Google helped initiate and support. Publishers can produce mobile web pages using the AMP framework so that content loads faster and creates a better user experience. Publishers can monetize their AMP pages including Google or other ad exchanges. There are pros and cons with AMP pages for publishers to consider.

Source: Compiled by BIA Advisory Services from Google and other sources, April 2021.

Table 6. Facebook Platforms and Broadcaster Revenue Share

Facebook Platform Service	Broadcaster Revenue Share	Terms
Facebook News Feed	No	<ul style="list-style-type: none"> The Facebook News Feed is the main feed Facebook provides to users based on its proprietary and changing content ranking algorithms. Broadcaster content can appear in the News Feed based on a user’s social graph, e.g., what sources they follow, friends and family recommendations or if it is content Facebook algorithms rank as likely to be interesting to the user. Publishers are not allowed to serve ads in users’ News Feeds. Users may click on News Feed links to go directly to the publishers’ sites, or to Facebook Instant Articles that are publisher content optimized by Facebook for mobile users. Publishers can purchase sponsored posts in the News Feed.
Facebook Instant Articles	Yes	<ul style="list-style-type: none"> Broadcasters may sell ads in Instant Articles and keep 100 percent of their direct sold ads. Remnant inventory can be monetized via the Facebook Audience Network. Instant Articles are publisher produced content produced to Facebook standards to optimize the experience for Facebook mobile users.
Facebook Audience Network	Yes	<ul style="list-style-type: none"> Broadcasters have a variable revenue share with Facebook Audience Network. Facebook’s position is, “We believe that the Audience Network provides a mobile advertising experience that will better help publishers and developers monetize their apps, but we cannot commit to a specific revenue share at this point. Real-time reporting and expected payout are available in the “Audience Network” section in your app settings page.” Facebook Audience Network serves Facebook ads to third-party apps and content.
Facebook News	Yes	<ul style="list-style-type: none"> Facebook in the past has licensed content from news publishers it qualifies for the program. More recently, Facebook has begun striking news deal such as the licensing arrangement with News Corp to license media content in Australia.
Facebook Watch	Yes	<ul style="list-style-type: none"> Video creators keep 55 percent of Watch revenue, Facebook keeps 45 percent.
Facebook Live	Yes	<ul style="list-style-type: none"> Fan subscriptions. In-stream video ads.

Source: Compiled by BIA Advisory Services from Facebook and other sources, April 2021.

Table 7. Apple Platforms and Broadcaster Revenue Share

Apple Platform Service	Broadcaster Revenue Share	Terms
Apple News	Yes	<ul style="list-style-type: none"> Apple shares 100 percent of ad revenues with broadcasters from their direct sold and 30 percent of “back fill” ad inventory Apple sells. Publisher may also earn 50 percent of “pooled” ad revenue sold outside but near publisher content. Apple News is organized by channels (publications) and assigned to topics that users can follow. The Today feed in the app is based on an algorithm for matching channels and topics to user interests. Broadcasters apply to be accepted to Apple News and submit content in Apple News Format so it renders on Mac, iPhones, and iPad devices. Publishers must follow Apple News Ad Guidelines and Apple News Ad Guidelines

Apple News Plus	Yes	<ul style="list-style-type: none"> • Apple News Plus is a news subscription for users to access publisher content behind a paywall. This is most typical for print publishers not broadcasters. • Apple’s standard fee is 30 percent of the publisher’s subscription fees. • Beginning in December 2020, Apple introduced a new program for smaller businesses and reduced its revenue split to 15 percent for those qualifying.
Apple App Store	Yes	<ul style="list-style-type: none"> • There are four typical App Store revenue models: Free (ad-supported), Freemium (free with ads with options to upgrade with in-app purchases), Subscription, Paid App (pay once). • Publishers receive 70 percent of App Store revenue in most cases, but some smaller publishers may be eligible to receive 85 percent. For subscriptions, Apple’s revenue share to publishers increases in subsequent years.
Apple Search Ads	Yes	<ul style="list-style-type: none"> • Apple Search Ads promote iOS apps in the App Store. • App publishers keep 100 percent of the ad revenue they produce.

Source: Compiled by BIA Advisory Services from Apple and other sources, April 2021.

Table 8. Amazon Platforms and Broadcaster Revenue Share

Amazon Platform Service	Broadcaster Revenue Share	Terms
Amazon News	Yes	<ul style="list-style-type: none"> • Publishers monetize their content in Amazon News via Amazon Publisher Services (APS). (See Amazon Publisher Services row in this chart).
Fire TV News App	Yes	<ul style="list-style-type: none"> • Broadcasters may license content via a distribution agreement for Amazon News. • Amazon News is a free ad-supported service offered on Amazon’s Fire TV platform. • Fire TV users access the “Local News” tab within their Fire TV news app. Fire TV will automatically detect the closest metro area and add the local news station (or stations) within the tab. • Amazon has done distribution deals with ABC O&O Stations, CBSN, Tegna, Cox, and The E.W. Scripps Company. • Revenue share to stations is 55 percent.
Amazon Publisher Services	Yes	<ul style="list-style-type: none"> • Amazon Publisher Services (APS) comprises a suite of cloud-based publisher platform services including Transparent Ad Marketplace, Unified Ad Marketplace, and Shopping Insights Service. • The APS terms and conditions are presented here. • APS provides publishers access to Amazon’s web and mobile app programmatic ad marketplace and services. • Amazon Publishers Services does not charge publishers a revenue share or monthly fees. SSPs pay a nominal \$0.01 CPM per impression served.
Amazon Appstore	Yes	<ul style="list-style-type: none"> • Amazon Developer Services revenue opportunities vary according to specific publisher agreements with Amazon, e.g., for Alexa Voice Services, Mobile Ad Network, etc.

Source: Compiled by BIA Advisory Services from Amazon and other sources, April 2021.