

**An Economic Analysis of Indicators of Competition  
in the Audiovisual Industry**

**Prepared on Behalf of the Motion Picture Association**

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## I. INTRODUCTION

This report assesses the competitive health of the audiovisual industry by analyzing economic outcomes, and concludes that the audiovisual industry is dynamic and shows signs of being a highly competitive industry.<sup>1</sup>

One approach to assessing competition is based on an empirical analysis of economic outcomes. This report analyzes metrics on outcomes that are commonly used by economists to assess the competitive health of an industry—including prices, output, quality, innovation, and entry. A hallmark of a competitive industry is that products that provide more value to consumers thrive and grow in the marketplace and gain share quickly, a key characteristic present in the audiovisual industry. Most recently, this dynamic is clearest with the growing share of time consumers spend with content from online streaming services and short-form video content.

The empirical evidence supports the conclusion that the audiovisual industry is dynamic and exhibits signs of being highly competitive, providing numerous benefits to consumers of audiovisual content. Furthermore, the empirical evidence is consistent with the conclusion that the audiovisual labor market is functioning in a healthy manner, which provides benefits to workers within the industry. The remainder of this report is structured as follows:

- Section II provides an overview of the audiovisual industry, including a discussion of the key stages of content production and distribution, as well as a summary of the industry participants, which encompasses tens of thousands of companies in the United States. Section II also documents the economic importance of the audiovisual industry in California.
- Section III presents economic evidence supporting that the audiovisual industry is dynamic and exhibits signs of a highly competitive industry. Over

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<sup>1</sup> This report focuses on motion pictures, television, and other audiovisual content, hereafter collectively termed “the audiovisual industry.” Other organizations within the entertainment industry, such as gaming, music, and live events, are not within the scope of this report. However, these sectors of the entertainment industry also compete for the attention of consumers of audiovisual content and for advertiser spending.

the past decade, significant technological advances have driven substantial changes in how content is produced, who is producing content, and how it is being distributed to consumers. The empirical evidence on outcomes in the audiovisual industry—including entry and growth in OTT services, competition from short-form video, increasing output and quality, and competitive pricing in the audiovisual industry—supports the conclusion that the audiovisual industry is well-functioning, dynamic, and exhibits signs of being a highly competitive industry.

- Section IV addresses the competitive health of the audiovisual labor market, by analyzing key metrics, including employment levels and wages. New distribution technologies and services have lowered barriers to entry for entertainment talent to reach consumer audiences. Unionization in the audiovisual industry gives workers collective bargaining power to negotiate employment terms with production and streaming companies. These factors have contributed to stable employment levels and stable or increasing wages in the audiovisual industry.
- Section V concludes, finding that the empirical evidence supports that the audiovisual industry exhibits signs of a dynamic and highly competitive industry, benefiting both consumers and workers in the industry.

## **II. INDUSTRY BACKGROUND**

The audiovisual industry encompasses a wide range of content that is created and distributed to consumers. This background section provides a summary of audiovisual content production and distribution, as well as a discussion of the numerous firms and organizations that participate in the industry. An important phenomenon in the audiovisual industry throughout its history is entry of and competition from new forms of production and distribution, including most recently short-form, user-generated video. These points are introduced in this section and are discussed in more detail in Section III. Finally, this section

summarizes the importance of the audiovisual industry in California, noting that it contributes billions of dollars in spending and about two hundred thousand jobs annually in the state.

### **A. Key Stages of Content Production and Distribution**

There are a handful of key stages to the production and distribution of motion pictures and television (TV) content in the United States:<sup>2</sup>

- **Preparation and Research & Development (R&D).** This stage includes pre-greenlight activities including developing a script, packaging talent, budgeting production scenarios, and developing visual presentations required to pitch and greenlight the project. It also includes R&D of new technologies that might be used in the project.
- **Pre-production.** This stage covers the steps after greenlighting involved in defining detailed plans and processes for production. It includes virtual production and previsualization, which are used to plan more efficient principal photography and ensure the seamless combination of physically and digitally produced elements.
- **Production.** This stage involves capturing and creating content on set, on location, in animation, and visual effects. It includes lights, cameras, sets, talent, grips, green screens, and large media files.
- **Post-production and Mastering.** Often the lengthiest part of the creation process, this includes steps such as editing, adding visual effects, mixing/editing audio, color grading, and creating international masters.
- **Marketing and Distribution.** This stage includes preparing and delivering numerous variants of the content to the owner’s distribution partners for

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<sup>2</sup> MPA, “The American Motion Picture and Television Industry – Creating Jobs, Trading Around The World,” 2022, available at [https://www.motionpictures.org/wp-content/uploads/2024/03/MPA\\_Economic\\_contribution\\_US\\_infographic-1.pdf](https://www.motionpictures.org/wp-content/uploads/2024/03/MPA_Economic_contribution_US_infographic-1.pdf), p. 1; MovieLabs, “The Evolution of Media Creation – A 10-Year Vision for the Future of Media Production, Post and Creative Technologies,” available at [https://movielabs.com/prodtech/ML\\_2030\\_Vision.pdf](https://movielabs.com/prodtech/ML_2030_Vision.pdf), p. 8.

onward delivery to consumers. Delivery includes theatrical distribution, physical media (optical disc), multichannel video programming distributors (MVPDs), broadcasters, and over-the-top (OTT) internet-based distribution services, such as audiovisual streaming services.

In addition, the rapidly changing audiovisual landscape has given rise to other types of content, including short-form audiovisual content.<sup>3</sup> While the creation process for short-form content can follow some of the same production processes described above, content can also be created more rapidly from a user filming a short video and posting it online. In contrast to such short-form content production, longer-form TV and film content require substantially higher production costs, resulting in substantially more uncertain returns and risk.<sup>4</sup> Popular platforms that distribute short-form content include YouTube, TikTok, Facebook, and Instagram.<sup>5</sup> Recent trends suggest that consumers' preferred length of short-form videos is a

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<sup>3</sup> While there is not a precise delineation between short- and long-form content, audiovisual content of a few minutes in length or shorter are often considered short-form. See Tamilore Oladipo, "Ask Buffer: What is Short-Form Video, and How Can You Use It?," *Buffer*, May 30, 2023, available at <https://buffer.com/resources/short-form-video/>.

<sup>4</sup> Vogel (2020) notes that "[m]any, if not most, films do not earn any return, even after taking account of new-media revenue sources; it is the few big winners that pay for the many losers [...] [I]n a statistical sense, most major-distributed films do no better than to break even financially, with extreme deviations from this mean in both directions. [...] Movies, in other words, have a low probability of earning high revenues, and a high probability of earning low revenues. [...] This leads to an estimate that perhaps 10% of movies (released by the majors) earn about 85% of the industry's total profits and that exhibition on a large number of screens can as easily lead to rapid failure as to quick and great success." See Harold L. Vogel, *Entertainment Industry Economics*, Cambridge University Press, 10th ed., 2020, pp. 163-167.

<sup>5</sup> Facebook and Instagram are considered social media platforms, but users are spending much of their time on these platforms viewing video content. In 2023, Facebook users' share of minutes spent on video was 46.9 percent, and Instagram's was 55.9 percent. See Variety VIP+, "The Race to Replace TV: A deep-dive data exploration of the new viewing trends revving up U.S. screens," Special Report, First Edition, July 2024, available at <https://read.vip.variety.com/html5/reader/production/default.aspx?pubname=&edid=a535829d-aadc-4265-8ade-05912388ed23>, p. 11.

TikTok is a social media platform that allows users to create, share, and discover short-form audiovisual content across a wide range of genres, including comedy, music/dance, and education. See Griffin LaFleur, "TikTok," *TechTarget*, available at <https://www.techtarget.com/whatis/definition/TikTok>.

few minutes.<sup>6</sup> As described in greater detail in the following section, audiovisual content distributed through social media and other OTT providers—referred to as social video or short-form content—is growing rapidly and competing with more traditional audiovisual content distribution.

## B. Industry Participants

The audiovisual industry consists of several key types of industry participants that work to bring audiovisual content to consumers:

- **Content Creators.** Production studios create motion picture and television audiovisual content through pre- and post-production processes. They include Walt Disney Company, Sony Pictures, Warner Bros, Paramount, and Universal,<sup>7</sup> as well as numerous other production studios, such as AGC Studios, A24 films, Miramax, ArcLight Films, and Lionsgate Films, each of which produce a variety of motion pictures, including many that are commercially and/or artistically successful.<sup>8</sup> Recently, streaming platforms,

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YouTube hosts video content of varying length, including full-length feature films that are available as part of its premium subscription plans, and YouTube Shorts that are videos that are no longer than 60 seconds. See YouTube, “YouTube Premium & streaming limits,” available at <https://support.google.com/youtube/answer/7361503?hl=en&co=GENIE.Platform%3DDesktop>; Extreme, “Succeeding with YouTube Shorts: a comparison with TikTok and Instagram Reels,” October 1, 2024, available at <https://madebyextreme.com/insights/youtube-shorts-quick-guide>.

<sup>6</sup> One survey found that 55 percent of respondents mostly watched videos on social media that are a “few minutes long,” 16 percent of respondents mostly watched videos that are “30 minutes or more,” and 29 percent mostly watched videos that are “60 seconds or less.” See Variety VIP+, “The Race to Replace TV: A deep-dive data exploration of the new viewing trends revving up U.S. screens,” Special Report, First Edition, July 2024, available at <https://read.vip.variety.com/html5/reader/production/default.aspx?pubname=&edid=a535829d-aadc-4265-8ade-05912388ed23>, p. 21.

<sup>7</sup> Harold L. Vogel, *Entertainment Industry Economics*, Cambridge University Press, 10th ed., 2020, pp. 97-98.

<sup>8</sup> Independent File & Television Alliance, “Membership Directory,” available at <https://ifta-online.org/membership-directory/>; Harold L. Vogel, *Entertainment Industry Economics*, Cambridge University Press, 10th ed., 2020, pp. 97-98; The Economist, “The rise and rise of A24, a champion of storytelling on screen,” September 1, 2022, available at <https://www.economist.com/culture/2022/09/01/the-rise-and-rise-of-a24-a-champion-of-storytelling-on-screen>.

such as Netflix, Amazon Studios, and Apple Studios, have entered the production-side of content creation, often financing and producing full-length, high-budget motion pictures.<sup>9</sup> And, as described earlier, audiovisual content is also created on a smaller scale by individuals and small groups.

- **Exhibitors, MVPDs, Streaming Services, and Other OTT Distribution.**

There are hundreds of services that distribute audiovisual content to consumers through multiple channels, including traditional movie theaters, cable and satellite video services, OTT streaming services, and other OTT distribution such as social media platforms. Movie theater “exhibitors” include Regal Entertainment Group, AMC Entertainment, Cinemark USA, Marcus Corp,<sup>10</sup> and independent local theaters.<sup>11</sup> There are numerous MVPDs, including services from Comcast Xfinity, Charter Spectrum TV, Cox, DISH, DirecTV, and Verizon FiOS.<sup>12</sup> Virtual MVPDs (or vMVPDs) services include YouTube TV, Hulu + Live TV, DirecTV Now, Sling TV, and fuboTV.<sup>13</sup> Over 200 OTT streaming services exist in the marketplace including larger, well known streaming services such as Netflix, Hulu, Apple TV+, Amazon Prime, Disney+, Max, Paramount+, Tubi, and Peacock, as well as niche audiovisual OTT services such as Crunchyroll, which streams Japanese animation (anime) content, AfroLandTV and In The Black Network, which stream movies and TV shows with largely African-American-centric content, and Faithlife TV,

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<sup>9</sup> Id.

<sup>10</sup> Id., pp. 96-97.

<sup>11</sup> See, e.g., Homero Rosas Navarrete, “Top Independent Movie Theaters in LA,” *Do LA*, January 10, 2024, available at <https://dola.com/p/top-independent-movie-theaters-in-la>. Independent theaters are often known as smaller “mom-and-pop” theaters not owned by the major chains such as Regal Cinemas. The National Association of Theatre Owners defines independent members as companies with no more than 75 screens. See National Association of Theatre Owners, “FAQs,” available at <https://theatreowners.org/faqs/>.

<sup>12</sup> Frankie Karrer, “MVPD and vMVPD: Differences & Similarities Explained,” *mtn*, available at <https://mountain.com/blog/mvpd-vmvpd/>.

<sup>13</sup> Symphony AI, “Virtual Multichannel Video Programming Distributors (vMVPDs),” available at <https://www.symphonyai.com/glossary/media/vmpd-virtual-multichannel-video-programming-distributor/>.



which specializes in streaming Christian content.<sup>14</sup> Various OTT content-sharing sites and social media platforms such as YouTube, Instagram, Facebook, and TikTok have also become important channels of content distribution. See discussion in Section III.

- **Labor Unions and Guilds.** Labor unions and guilds play an important role in the audiovisual industry by negotiating labor contract terms and compensation for their members.<sup>15</sup> Labor unions negotiate with content creators' bargaining organization, the Alliance of Motion Picture and Television Producers (AMPTP).<sup>16</sup> Some of the main labor unions include Directors Guild of America (DGA), International Cinematographers Guild (ICG), International Alliance of Theatrical and Stage Employees (IATSE), SAG-AFTRA (Screen Actors Guild merged with American Federation of Television and Radio Artists), and Writers Guild of America (WGA).<sup>17</sup> Members of the AMPTP, which includes members of the Motion Picture Association (MPA), negotiate with more than 45 unions, operating under 64 collective-bargaining agreements.

### **C. The Audiovisual Industry Plays an Important Role in California's Economy**

The audiovisual industry—comprised of the companies and organizations described above—is an important industry within the state of California. A report by the California Film Commission (CFC) noted that between 2009 and 2022, the film and television industry

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<sup>14</sup> Crunchyroll, available at <https://www.crunchyroll.com/about/>; AfroLandTV, available at <https://www.afrolandtv.com/about/>; In The Black Network, "About Us," available at <https://itbn.intheblacknetwork.tv/about/>; Faithlife TV, available at <https://faithlifetv.com/>.

<sup>15</sup> Harold L. Vogel, Entertainment Industry Economics, *Cambridge University Press*, 10th ed., 2020, pp. 146-147.

<sup>16</sup> Id.

<sup>17</sup> Id.

employed about 200,000 people per year in California.<sup>18</sup> Film and television projects approved under CFC’s tax credit program (Program 3.0), which represent a subset of California’s film and television production, have generated a total of \$7.3 billion in California in-state spending (through expenditures and wages paid) since Program 3.0 started on July 1, 2020.<sup>19</sup> As of June 30, 2023, projects that were approved under the 2022-2023 fiscal year contributed an estimated \$3.1 billion in spending in California.<sup>20</sup> Similarly, MPA reported that in 2022 alone, key film and television companies paid out almost \$17.5 billion to 68,235 vendors in California.<sup>21</sup> Since 2017, key film and television companies have paid on average \$11.6 billion per year to local vendors in California.<sup>22</sup>

California competes with other states and countries for audiovisual production—e.g., motion picture and television series shooting locations. The economic attractiveness of California compared to other locations can be a determinative factor in how many movies and shows are produced in the state versus out of state. Primarily driven by lower production costs outside California and incentive programs offered by other states to attract studios, “decentralization” of production away from California has been occurring for many years but accelerated during the 2023 labor strikes.<sup>23</sup> The ongoing move away from California adversely impacts employees and companies that rely on the audiovisual industry in California.

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<sup>18</sup> California Film Commission, “Film and Television Tax Credit Programs Progress Report,” December 2023, available at <https://cdn.film.ca.gov/wp-content/uploads/2024/04/Progress-Report-2023.pdf>, pp. 3-6. See also analysis presented in Figure 22.

<sup>19</sup> *Id.*, pp. 13-14.

<sup>20</sup> *Id.*

<sup>21</sup> MPA, “California – Economic Impact of the Motion Picture & TV Industry,” April 2024.

<sup>22</sup> *Id.*

<sup>23</sup> Otis College “Report on the Creative Economy,” May 2024, available at <https://www.otis.edu/about/initiatives/documents/otis-college-report-creative-economy-may-2024.pdf>, p. 2.

### **III. THE ECONOMIC EVIDENCE SHOWS THE AUDIOVISUAL INDUSTRY IS DYNAMIC AND HIGHLY COMPETITIVE**

A competitive industry provides benefits to consumers of the goods and services sold by firms in that industry. Competition reflects supply-side conduct that raises consumer welfare through innovation and output. A hallmark of a competitive industry is that consumers can move rapidly to products that provide more value. Thus, the competitive health of an industry and the benefits or harms to consumers can be assessed directly and reliably by analyzing economic outcomes such as prices and output in that industry. While a full consumer welfare analysis is outside the scope of this report, the empirical evidence on outcomes in the audiovisual industry—including entry and growth in OTT services that deliver content to consumers anytime, anywhere, competition from short-form video, increasing output and quality, and pricing that is consistent with a competitive industry—supports the conclusion that the audiovisual industry is well-functioning, dynamic, and exhibits signs of healthy competition.

#### **A. The Audiovisual Industry Is Dynamic and Highly Innovative**

The audiovisual industry has been, and continues to be, dynamic and highly innovative. There have been technological advances in production and distribution through a proliferation over time of different ways in which consumers can access audiovisual content. Key examples include the shift from videotape to DVD and Blu-ray, and the shift from DVD and Blu-ray to streaming services and OTT access to audiovisual content from anywhere using any device.

There has been innovation in the production and post-production of audiovisual content. In the 1980s, motion pictures began to move from film reels to digital film, which created benefits such as ease of storage, reduced storage costs, reduced production/editing costs, and allowing for higher frame rates to be filmed.<sup>24</sup> Moreover, advances in computer-

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<sup>24</sup> History of Film, “Film vs Digital - Film Photography and Digital Cinematography,” available at <http://www.historyoffilm.net/film-making/film-vs-digital/>. Notably, it was not until the early 2000s that digital films were more commercially shot and shown in cinemas. See Id.; Shelby Burr, “When did movie theaters stop using film?,” *Legacy Box*, available at <https://legacybox.com/blogs/analog/when-did-movie-theaters-stop-using-film>; and Europa

generated imagery (CGI)—that is, the application of computer graphics technologies to generate imagery—have led to advances in visual effects for many genres of TV and film.<sup>25</sup> There is also an effort—known as “2030 Vision”—to advance interoperable, secure, cloud-based production technologies with the goal of enhancing efficiency and promoting competition through interoperability and reducing so-called walled gardens in the industry.<sup>26</sup>

The entry and growth of OTT audiovisual distribution services have significantly changed the competitive landscape. OTT services, which include companies such as Netflix, Amazon, Apple TV, Hulu, Max, and YouTube TV, as well as more niche services such as Crunchyroll, AfroLandTV, In The Black Network, and Faithlife TV, among many others, are additional ways for consumers to access audiovisual content anywhere, anytime.<sup>27</sup> These services allow consumers to access massive content libraries almost instantly on a wide variety of devices, both in and out of the home.

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Distribution, June 22, 2006, available at [https://www.europa-distribution.org/files/bruxelles/digital\\_cinema\\_figures.pdf](https://www.europa-distribution.org/files/bruxelles/digital_cinema_figures.pdf).

<sup>25</sup> For examples of advancements in video CGI over the years, see Sticky Media, “The History of CGI in Movies,” May 19, 2020, available at <https://www.stikkymedia.com/history-of-cgi-in-movies/>; and Ros Tibbs, “Timeline: A brief history of CGI in the movies,” *Far Out*, February 28, 2023, available at <https://faroutmagazine.co.uk/timeline-history-of-cgi-movies/>.

<sup>26</sup> MovieLabs, “The 2030 Vision: A bold 10-year vision for the adoption of new technologies to aid in content production, post and VFX,” available at <https://movielabs.com/production-technology/the-2030-vision/>. A few of the goals of the 2030 Vision include: (1) facilitating direct access between recording equipment and cloud storage to allow the seamless transfer of media files directly from production sets to directors, producers, and executives; (2) integrating software tools that allow artists to directly work on media files stored on the cloud services, eliminating the need to transfer files locally between machines, and the need for a powerful local machine to process artist work; and (3) streamlining the archival process of content and files by moving archive libraries onto the cloud, allowing intellectual property to be stored and retrieved easily. See MovieLabs, “2030 Vision Series - The Evolution of Media Creation,” available at [https://movielabs.com/prodtech/ML\\_2030\\_Vision.pdf](https://movielabs.com/prodtech/ML_2030_Vision.pdf), pp. 10, 18-29.

<sup>27</sup> Between July 2021 and August 2024, Nielsen reported that streaming services’ share of total TV usage had grown from 28.3 percent to 41.0 percent. See Nielsen, “Amid the fragmented TV landscape, time spent with content is the best planning data there is,” January 2024, available at <https://www.nielsen.com/insights/2024/amid-the-fragmented-tv-landscape-time-spent-with-content-is-the-best-planning-data-there-is/>; Nielsen, “The Gauge – TV viewing trends in the U.S.,” available at <https://www.nielsen.com/data-center/the-gauge/>; Nielsen, “Streaming claims largest piece of TV viewing pie in July,” August 2022, available at <https://www.nielsen.com/insights/2022/streaming-claims-largest-piece-of-tv-viewing-pie-in-july/>.

In addition to distribution, new entrants such as Apple, Netflix, and Amazon have had a significant impact on the marketplace through their production of content that has achieved both critical and commercial success.<sup>28</sup> Examples include the series *Stranger Things* (Netflix) and *The Boys* (Amazon Prime), both of which attracted millions of views within weeks of their releases.<sup>29</sup> Similarly, films like Apple TV's *Killers of the Flower Moon* earned critical acclaim, including 10 academy award nominations, and became one of the most watched movies across all streaming services in the first week of February 2024.<sup>30</sup>

From an economic perspective, OTT services, which have grown to become ubiquitous in the United States, allow subscribers to more easily start and stop service and switch to new services based on changes in subscribers' preferences and/or changes in the prices, quality, and variety of content available on the services. These factors in part

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<sup>28</sup> OTT services that produce content both for distribution through their own streaming service or through other streaming services include Amazon Prime Video, Apple TV+, Crackle, Discovery+, Disney+, Max, Hulu, Netflix, Paramount+, Peacock, and YouTube Premium.

<sup>29</sup> In 2019, *Strangers Things*' third season was viewed by a record of 26.4 million U.S. viewers during its release over the July 4 holiday weekend. *The Boys* reached an audience of 4.1 million within the first 10 days of release. See Sarah Whitten, "Nielsen says new 'Stranger Things' season had record 26.4 million US viewers in first four days," *CNBC*, July 11, 2019, available at <https://www.cnn.com/2019/07/11/stranger-things-had-record-viewership-in-first-four-days.html>; Dade Hayes, "Amazon Prime Viewing Added To Nielsen, Which Reveals 'The Boys' Numbers," *Deadline*, October 21, 2019, available at <https://deadline.com/2019/10/amazon-prime-viewing-added-to-nielsen-which-reveals-the-boys-numbers-1202765075/>.

<sup>30</sup> ABC, "'Killers of the Flower Moon' is nominated for 10 Oscars including best picture, best director," available at <https://abc7chicago.com/2024-oscars-killers-of-the-flower-moon-winner-academy-awards/14476601/>; John-Anthony Disotto, "Killers of the Flower Moon is the most popular title on streaming this week — Apple TV Plus Original snaps the top spot from Oscars 'Best Picture' rival, *The Holdovers*," *iMore*, February 2, 2024, available at <https://www.imore.com/music-movies-tv/killers-of-the-flower-moon-is-the-most-popular-title-on-streaming-this-week-apple-tv-plus-original-snaps-the-top-spot-from-oscars-best-picture-rival-the-holdovers>.

One other notable example is Netflix's *The Irishman*, which also earned 10 academy award nominations for its merits and was watched by more than 26 million Netflix accounts within its first seven days of release. See Michael Hinman, "'The Irishman' earns 10 Oscar nominations," *The Riverdale Press*, January 17, 2020, available at <https://www.riverdalepress.com/stories/the-irishman-earns-10-oscar-nominations,71013>; Frank Pallotta, "Here's how many subscribers watched Netflix's 'The Irishman' in its first week," *CNN*, December 11, 2019, available at <https://www.cnn.com/2019/12/10/media/the-irishman-netflix-viewership/index.html>.

contribute to higher churn rates incurred by OTT services.<sup>31</sup> In response, to compete for viewers' attention, content distributors are incentivized to create and/or procure content and provide a wide range of content to users with near-instant access and at competitive prices, including by offering ad-supported tiers at lower prices.<sup>32</sup>

Many of these marketplace dynamics create benefits for consumers and industry participants. The fact that the audiovisual industry has moved from physical formats to OTT formats during recent decades is the result of innovation in the industry to adapt to new technologies and consumers' changing preferences for how they access content. The move to OTT has also helped combat digital piracy, although piracy continues to be a significant problem for the industry and is a source of competition for legal sources of audiovisual distribution.<sup>33</sup>

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<sup>31</sup> As of Q1 2024, Netflix had a monthly churn rate of two percent, Apple TV+ had eight percent churn, Amazon Prime had four percent churn, and Peacock had 8.7 percent churn. For additional churn rates for OTT services, see Scott Hurff, "Churn Rates for Streaming Services: How Sticky Are Hulu, Disney+, Netflix, and Apple TV+? (Updated Q1 2024)," *Churnkey*, December 13, 2023, available at <https://churnkey.co/blog/churn-rates-for-streaming-services/>.

According to Parks Associates, between Q1 2020 and Q3 2022, the churn rate for OTT streaming services grew from 40 percent to 45 percent (defined as subscribers who cancelled service as a percentage of the subscriber base), largely driven by high churn rates in less popular services: "Today's streamers tend to subscribe to one or more foundational services—typically Netflix, Amazon Video, or Hulu—and then subscribe to three or more additional services each offering unique and differentiated material. Consumers hold on to the services that they use the most and jump among the others, paying for a program or season and then canceling when they are finished." See Parks Associates, "OTT streaming Trends to Watch in 2022," available at [https://www.parksassociates.com/bento/shop/whitepapers/files/ParksAssoc-OTTStreamingTrends\\_2022-WP.pdf](https://www.parksassociates.com/bento/shop/whitepapers/files/ParksAssoc-OTTStreamingTrends_2022-WP.pdf); Parks Associates, "Parks: Video Streaming Providers Battle 50% Churn," January 17, 2024, available at <https://www.parksassociates.com/blogs/in-the-news/parks-video-streaming-providers-battle-50-churn>.

<sup>32</sup> For example, Netflix currently offers an ad-supported tier at \$6.99/month, which is less than half the price of its standard tier (\$15.49/month). Similarly, Peacock offers an ad-supported tier at \$7.99/month, and an ad-free tier at \$13.99/month. See Netflix, "Plans and Pricing," available at <https://help.netflix.com/en/node/24926>; and Peacock, "Pick a Plan. Cancel Anytime," available at <https://www.peacocktv.com/plans/all-monthly>.

<sup>33</sup> U.S. Chamber of Commerce, "Impacts of Digital Piracy on the U.S. Economy," June 15, 2019, available at <https://www.uschamber.com/technology/data-privacy/impacts-of-digital-piracy-on-the-u-s-economy>; Brett Danaher, Michael D. Smith, and Rahul Telang, "Piracy Landscape Study: Analysis of Existing and Emerging Research Relevant to Intellectual Property Rights (IPR) Enforcement of Commercial-Scale Piracy," *USPTO Economic Working Paper No. 2020-02*, April 16, 2020, available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3577670](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3577670).

Short-form audiovisual content distributors, including, e.g., TikTok, YouTube, Facebook, and Instagram, also provide significant competition for consumer attention. These services have emerged over the last decade as prominent alternatives for consumers to obtain content. According to a *Variety VIP+* special report, “Hollywood needs to wake up to social video,” referring to it as a “paradigm shift.”<sup>34</sup> In just the two years between 2022 to 2024, the sum of average hours per day spent by users watching video on the top-five social media platforms increased from 7.63 hours to 10.23 hours.<sup>35</sup> Andrew Wallenstein, President and Chief Media Analyst of *Variety VIP+*, explains:

More recently, the transformation has reached a height where the explosion of short-form video on social media is now competing more directly with content viewing on streaming services. [...] Scripted content, gaming and now social video are all part of the same attention economy, each vying daily for consumer eyeballs. Entertainment companies must reckon with how intellectual property can thrive in this new paradigm, an increasingly fragmented media landscape.<sup>36</sup>

In sum, the growth of short-form content has provided additional ways in which consumers can enjoy content and has placed competitive pressure on the more traditional content distributors.<sup>37</sup>

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<sup>34</sup> *Variety VIP+*, “The Race to Replace TV: A deep-dive data exploration of the new viewing trends revving up U.S. screens,” Special Report, First Edition, July 2024, available at [https://read-vip.variety.com/html5/reader/production/default.aspx?pubname=&edid=a535829d-aadc-4265-8ade-05912388ed23](https://read.vip.variety.com/html5/reader/production/default.aspx?pubname=&edid=a535829d-aadc-4265-8ade-05912388ed23), p. 2. Social video includes all time spent with online video activities on social network platforms (excluding YouTube) via any device.

<sup>35</sup> *Id.*, pp. 8-9. Figures represent the sum of average hours that a user from each social media platform spends watching videos. It does not represent the average amount of time a typical user spends per day watching videos on social media. Specifically, 10.23 hours in 2024 represents the sum of average hours per day spent watching video on top-5 social media platforms: 2.48 hours per day by TikTok users; 2.46 hours per day by Instagram users; 2.28 hours per day by Facebook users; 2.08 hours per day by YouTube users; 0.93 hours per day by Discord users.

<sup>36</sup> *Id.*, p. 2.

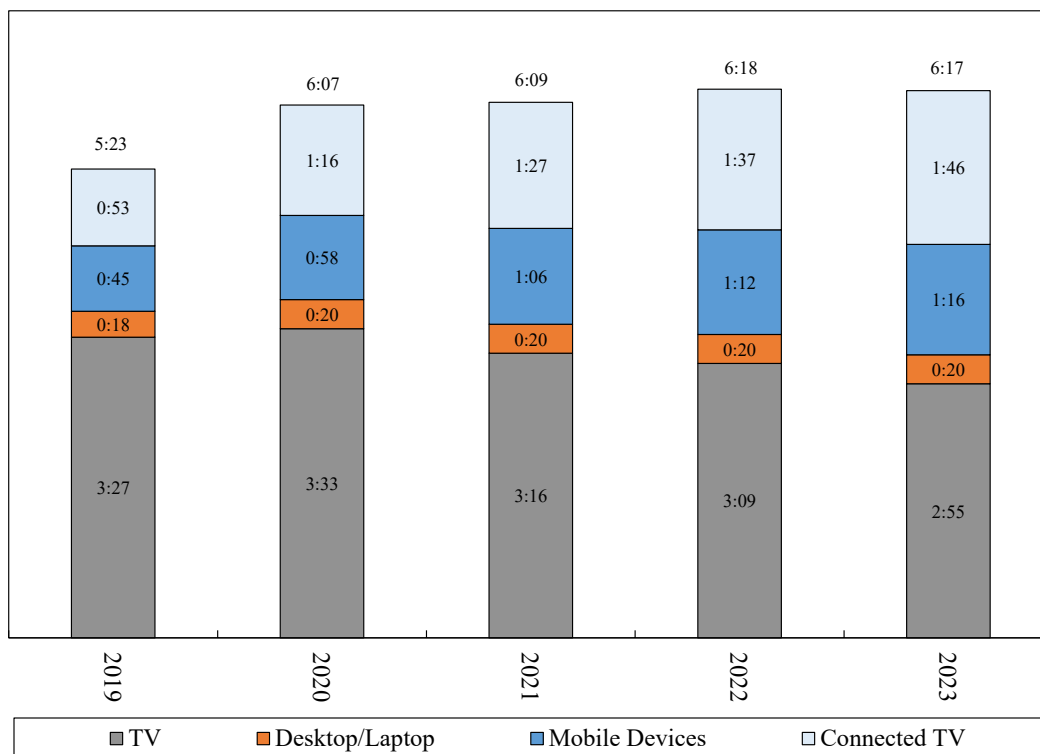
<sup>37</sup> See, e.g., John Koetsier, “Netflix vs TikTok: The Battle Between Long And Short,” *Forbes*, May 17, 2022, available at <https://www.forbes.com/sites/johnkoetsier/2022/05/17/netflix-vs-tiktok-the-battle-between-long-and-short/>.

## B. Entry and Innovation in the Industry Have Brought New Products and Services to Consumers

The analysis below provides empirical evidence, based on multiple data sources documenting the market dynamics in the audiovisual industry, that entry and innovation in the industry have led to a material shift in the way audiovisual content is consumed by U.S. consumers. This shift includes both the devices on which audiovisual content is consumed and the OTT services that deliver audiovisual content to consumers. The data signal a dynamic marketplace that is undergoing change and bringing new, improved products and services to consumers.

The devices on which consumers access their entertainment is changing. The consumption of audiovisual media by U.S. adults on a mobile device increased from 45 minutes in 2019 to 76 minutes in 2023, and the consumption of audiovisual media by U.S. adults on connected TVs has doubled between 2019 and 2023. See figure below.

**Figure 1 – Average Time Spent Per Day With Video by U.S. Adults**



**Notes:** Time spent with each medium includes multitasking—e.g., one hour on a mobile phone while watching TV is counted as one hour for mobile phone and one hour for TV.

**Source:** Estimates by eMarketer.



The shift towards consuming audiovisual content on mobile devices is also apparent from the large amounts of wireless broadband being used for streaming services. Ericsson estimates that audiovisual apps represented over 40 percent of mobile traffic volume in North America.<sup>38</sup> A GSMA survey shows that the share of mobile internet users who engaged in watching “free online video” on at least a monthly basis increased from approximately 55 percent to approximately 70 percent between 2019 and 2022, and the share of those who do so on at least a weekly basis increased from approximately 45 percent to approximately 60 percent over the same period.<sup>39</sup> Mobile service providers recognize the growing demand for streaming audiovisual content on wireless networks and offer plans that facilitate these consumption habits.<sup>40</sup>

Consumers increasingly obtain content from OTT/internet-based streaming and social media. Between 2021 and 2023, the average time spent per day on OTT and social video has increased from about two hours per day to 2.50 hours per day, while time spent on traditional TV has decreased from about 3.27 hours per day to three hours per day.<sup>41</sup> Furthermore, a survey conducted by Hub Entertainment on audiovisual consumption habits indicated that

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<sup>38</sup> Ericsson Mobility Report, June 2023, available at <https://www.ericsson.com/49dd9d/assets/local/reports-papers/mobility-report/documents/2023/ericsson-mobility-report-june-2023.pdf>, pp. 16-17.

<sup>39</sup> GSMA, “The State of Mobile Internet Connectivity 2023,” available at <https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf>, p. 77.

<sup>40</sup> For example, T-Mobile notes that “[v]ideo is the number one way people use wireless data [...],” and it offers “Binge On” to its subscribers, in which detectable video streaming is optimized for a subscriber’s mobile device, allowing them to “watch up to three times more video using the same amount of high-speed data.” Also, customers with qualifying plans can stream unlimited video from streaming services such as YouTube, Netflix, Hulu, Sling, and ESPN, among others, “without ever touching their high-speed data.” See T-Mobile, “Unlimited video streaming with Binge On,” available at <https://www.t-mobile.com/tv-streaming/binge-on>.

<sup>41</sup> Variety VIP+, “The Race to Replace TV: A deep-dive data exploration of the new viewing trends revving up U.S. screens,” Special Report, First Edition, July 2024, available at <https://read.vip.variety.com/html5/reader/production/default.aspx?pubname=&edid=a535829d-aadc-4265-8ade-05912388ed23>, p. 7. The data is based on information from eMarketer, February 2024 Forecast, among U.S. adults 18+. Traditional TV includes all time spent watching TV live, digital video recorder (DVR) and other pre-recorded video (e.g., video downloaded from the internet but saved locally). Subscription OTT video includes all time spent watching video on subscription video on demand (SVOD) via any device. Social video includes all time spent with online video activities on social network platforms (excluding YouTube) via any device.

between 2022 and 2023, the share of respondents who reported spending less time watching “regular” TV shows and films due to watching non-premium online videos had increased from 55 percent to 58 percent for 13-24 year olds and from 29 percent to 36 percent for respondents ages 35 and over.<sup>42</sup> This is further evidence of share gains by new OTT options available in the marketplace relative to traditional distribution channels. This signals an increase in the number of ways in which consumers can access audiovisual content.

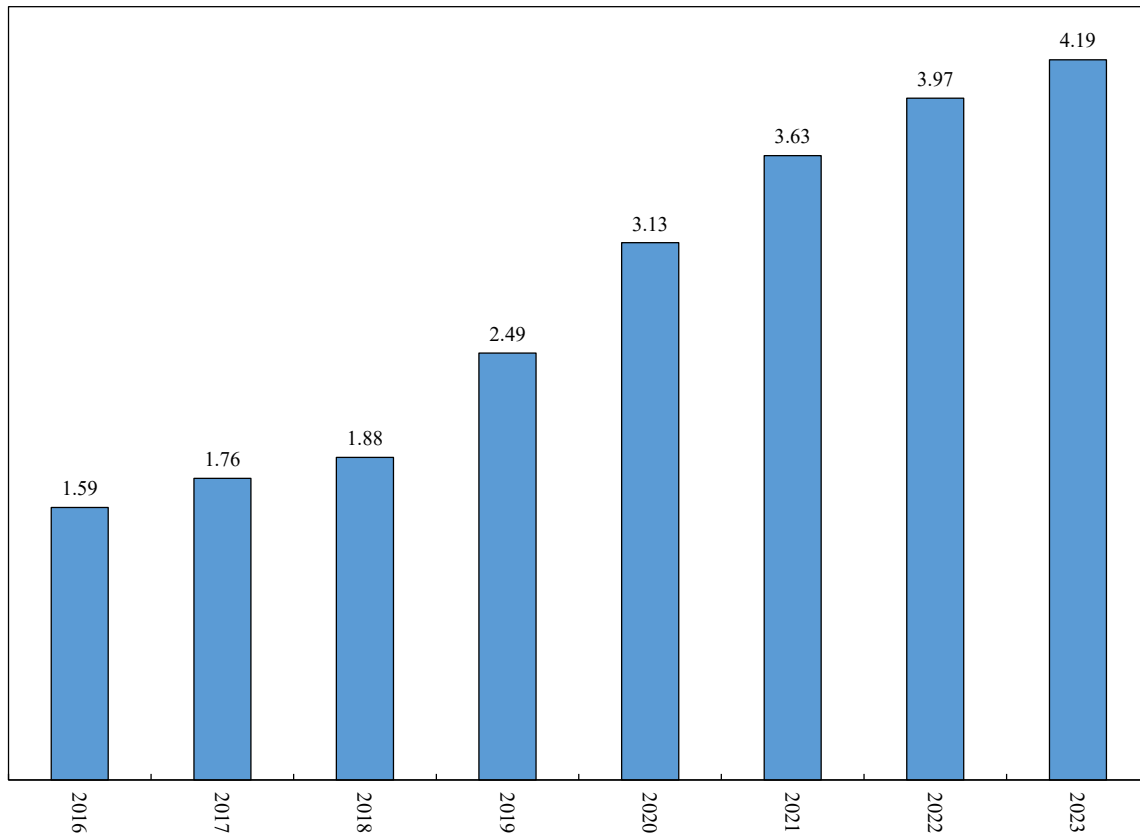
Additional evidence of a changing marketplace and consumer preferences is the continued shift towards obtaining audiovisual content from OTT services, as demonstrated by the average number of concurrent online video subscriptions per household in the United States, which grew from about 1.6 in 2016 to 4.2 in 2023.<sup>43</sup> See figure below.

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<sup>42</sup> Variety VIP+, “The Race to Replace TV: A deep-dive data exploration of the new viewing trends revving up U.S. screens,” Special Report, First Edition, July 2024, available at <https://read-vip.variety.com/html5/reader/production/default.aspx?pubname=&edid=a535829d-aadc-4265-8ade-05912388ed23>, p. 7. The original source is Hub Entertainment. The data is based on a survey fielded in December 2023 among U.S. respondents 13-74 with broadband access and who watch non-premium online video.

<sup>43</sup> Online video includes OTT video streaming services (e.g., Netflix and ESPN+) and vMVPDs (e.g., YouTube TV and Sling TV).

**Figure 2 – Average Online Subscriptions per Household**



**Notes:** Represents the average number of concurrent online video subscription services per online video household.

**Source:** Omdia.

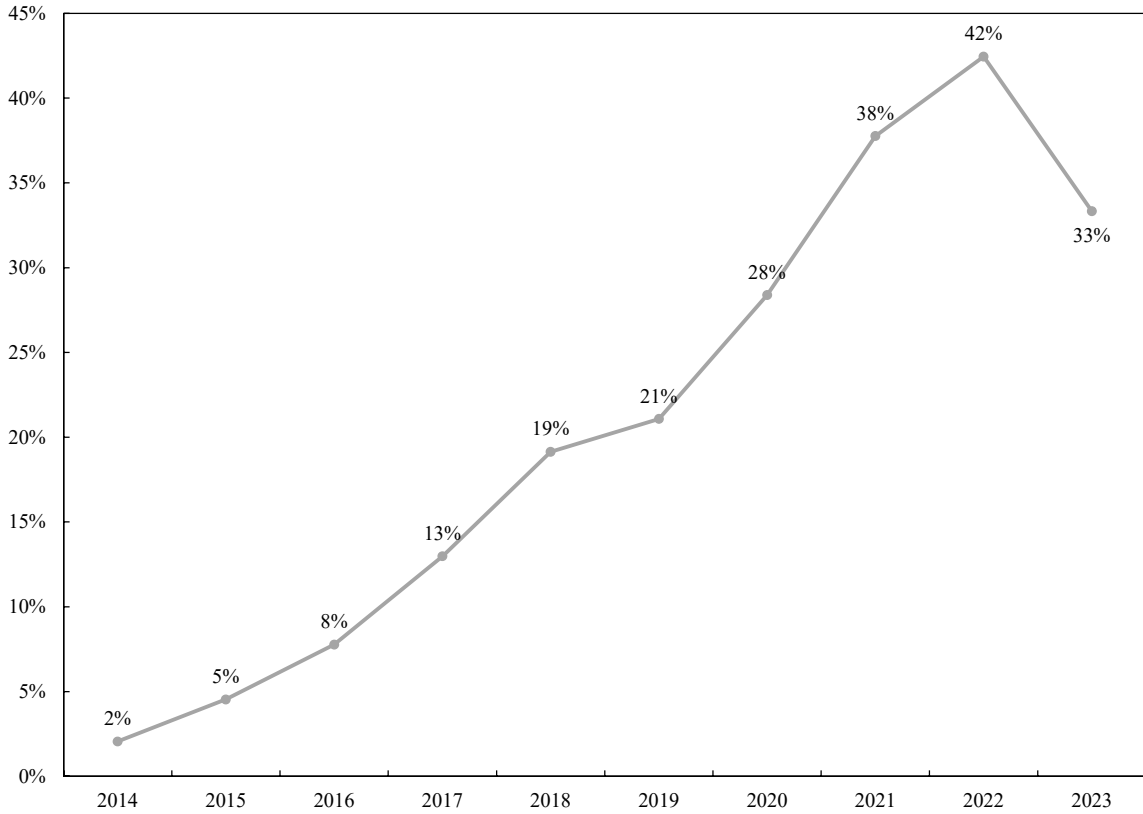
The shift towards OTT services is also apparent from the shift towards production of TV content for OTT services, which has increased dramatically. Between 2014 and 2022, the share of TV shows released via OTT services (i.e., streaming services) increased from 2 percent to 42 percent, with some decline in the share in 2023 due to the impact of the labor strikes on scripted content.<sup>44</sup> Moreover, the estimated costs that streaming services—Netflix, Apple TV+, Paramount+, Peacock, Max, Disney+, Hulu, and Amazon Prime Video—incur each year to create or acquire content has increased substantially from \$6.2 billion in 2014 to \$43.0 billion in 2022, representing a nearly 7-fold increase. See figures below. This demonstrates the significant amount of investments in content creation and procurement by

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<sup>44</sup> Traditional TV unscripted content release volume was steady in 2023.

the streaming services, resulting in increased amount and variety of content available to consumers.

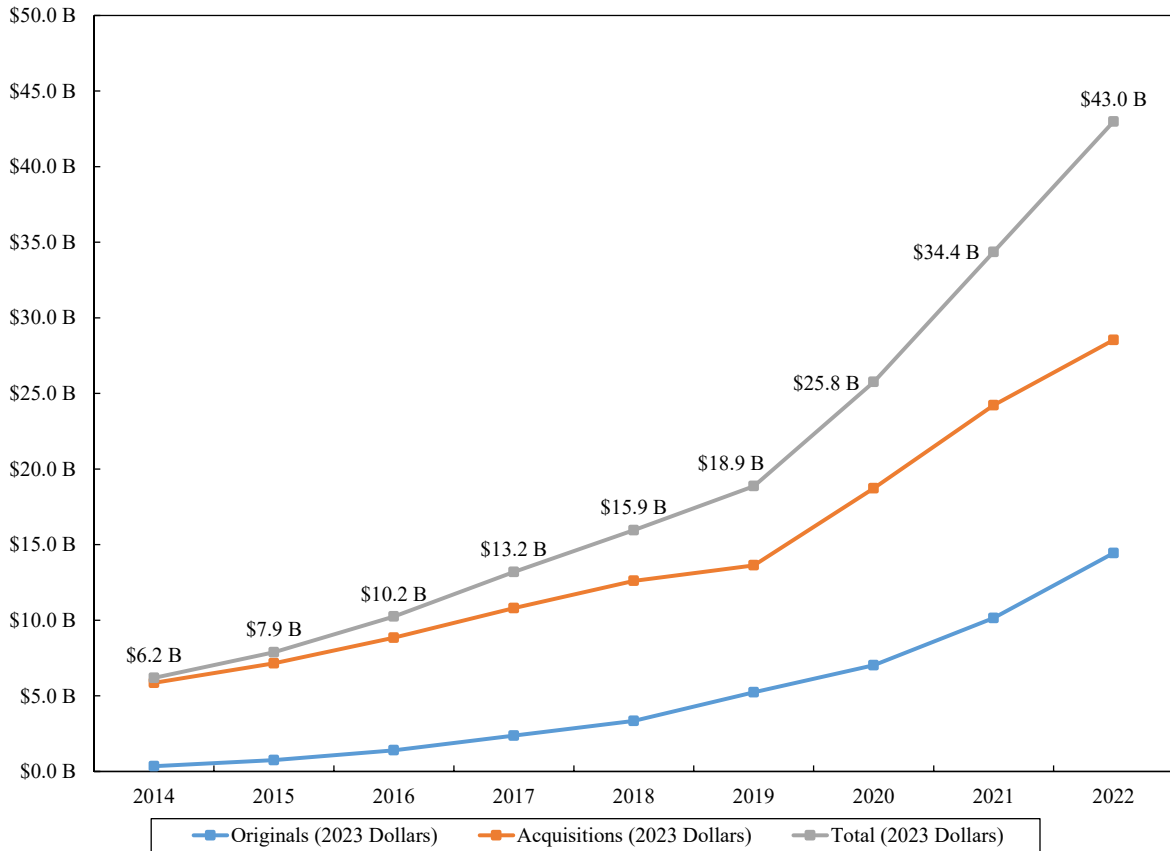
**Figure 3 – OTT Digital Releases as a Share of All TV Releases**



**Notes:** Share of digital releases is calculated by dividing the number of digital releases by the total number of traditional and digital releases.

**Source:** MPA.

**Figure 4 – Streaming Platform Content Costs (2023 Dollars)**



**Notes:** Analysis includes Netflix, Paramount+, Apple TV+, Peacock, HBO Max/Max, Amazon Prime Video, Disney+, and Hulu SVOD. Costs are adjusted to 2023 dollars using U.S. Bureau of Labor Statistics CPI All Items (excl. food & energy).

**Source:** S&P Capital IQ Pro; U.S. Bureau of Labor Statistics (series CUUR0000SA0L1E).

Finally, Nielsen reports that streaming services’ share of total TV usage has increased over time. Between May 2021 and April 2024, streaming services’ share of total TV usage increased from 28 percent to 38.4 percent.<sup>45</sup> In May 2021, Nielsen noted that only five

<sup>45</sup> Streaming services reported by Nielsen include Netflix, YouTube, Hulu, Amazon Prime, Disney+, Tubi, Max, Roku Channel, Peacock, Paramount+, and Pluto. See Nielsen, “Amid the fragmented TV landscape, time spent with content is the best planning data there is,” January 2024, available at <https://www.nielsen.com/insights/2024/amid-the-fragmented-tv-landscape-time-spent-with-content-is-the-best-planning-data-there-is/>; and Nielsen, “Nielsen Launches The Media Distributor Gauge, First Convergent TV Comparison of its Kind,” May 2024, available at <https://www.nielsen.com/news-center/2024/nielsen-launches-the-media-distributor-gauge-first-convergent-tv-comparison-of-its-kind/>.

streaming services accounted for more than one percent of total TV usage.<sup>46</sup> By August 2024, Nielsen reported that this figure increased to more than ten streaming services.<sup>47</sup> YouTube’s share of total TV usage increased from 6 percent to more than 10 percent during this period, overtaking Netflix’s share of 7.9 percent in August 2024 and making it the service with the largest share of streaming TV viewing in the United States.<sup>48</sup>

### C. Additional Metrics on Output in the Audiovisual Industry

The empirical evidence on output and quality—through the volume, variety, and diversity of audiovisual content, especially on OTT services—shows that the audiovisual industry is generating more output and higher quality content over time, which is being consumed by U.S. consumers who are spending more time viewing audiovisual content. The audiovisual industry is also releasing more films over time. In this section, I present additional data on output as measured through consumer transactions at movie theaters and for physical media and through supply-side measures such as the number of titles produced.

U.S. theater admissions have declined over the last two decades, with a precipitous drop in admissions during the COVID-19 pandemic, which saw theaters close doors as a result of lockdowns.<sup>49</sup> See figure below. Theaters have also faced competition from new

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<sup>46</sup> Nielsen, “Amid the fragmented TV landscape, time spent with content is the best planning data there is,” January 2024, available at <https://www.nielsen.com/insights/2024/amid-the-fragmented-tv-landscape-time-spent-with-content-is-the-best-planning-data-there-is/>.

<sup>47</sup> Nielsen, “The Gauge – TV viewing trends in the U.S.,” available at <https://www.nielsen.com/data-center/the-gauge/>.

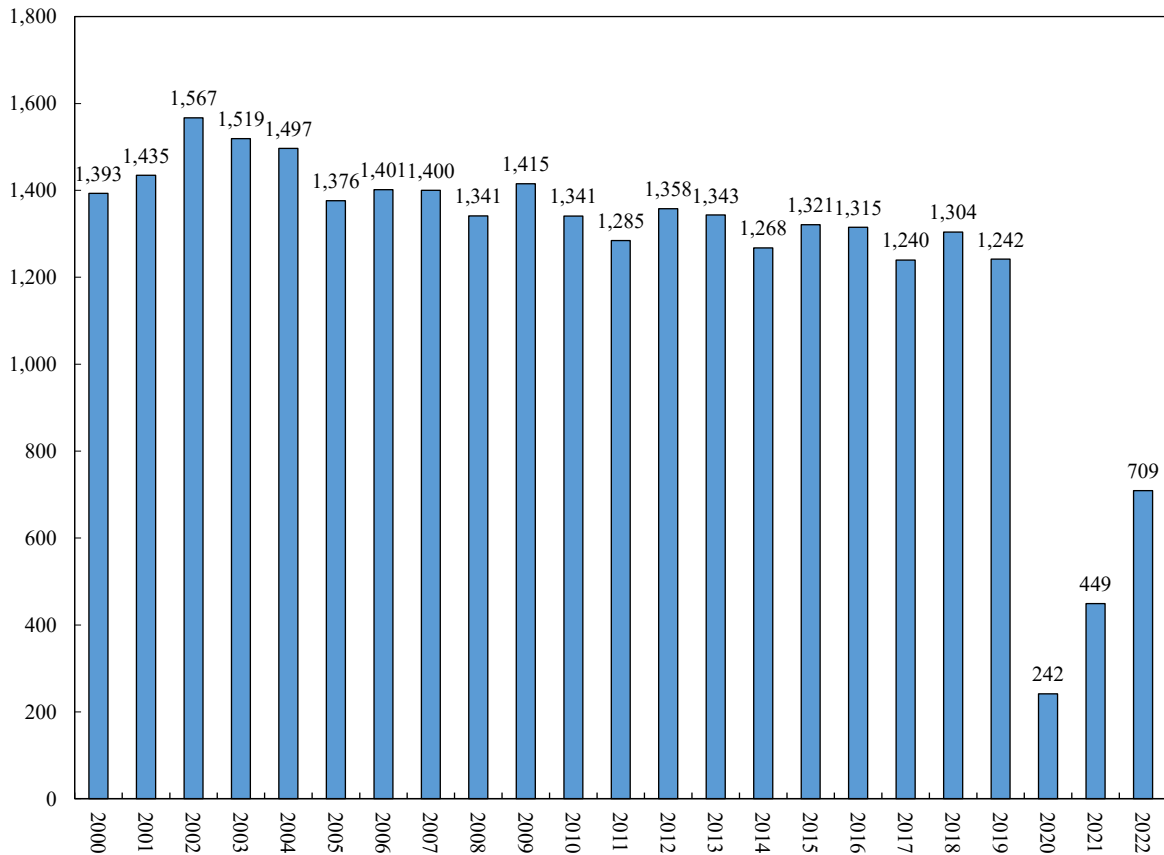
<sup>48</sup> Nielsen, “Amid the fragmented TV landscape, time spent with content is the best planning data there is,” January 2024, available at <https://www.nielsen.com/insights/2024/amid-the-fragmented-tv-landscape-time-spent-with-content-is-the-best-planning-data-there-is/>; Nielsen, “Nielsen Launches The Media Distributor Gauge, First Convergent TV Comparison of its Kind,” May 2024, available at <https://www.nielsen.com/news-center/2024/nielsen-launches-the-media-distributor-gauge-first-convergent-tv-comparison-of-its-kind/>; Nielsen, “The Gauge – TV viewing trends in the U.S.,” available at <https://www.nielsen.com/data-center/the-gauge/>.

Note that streaming TV usage does not include short-form and user-generated content, which comprises a large majority of content consumed on YouTube.

<sup>49</sup> Ryan Faughnder, “AMC and Regal close all U.S. theaters amid coronavirus crisis,” *Los Angeles Times*, March 16, 2020, available at <https://www.latimes.com/entertainment-arts/business/story/2020-03-16/as-l-a-theaters-close-due-to-coronavirus-amc-reduces-capacity-to-50>.

online digital formats for consuming audiovisual content, which, as discussed previously, have increased substantially over the past two decades. This has led to a decline in the consumption of motion picture content at U.S. theaters that is offset to some degree by increasing consumption of content in other sectors of the audiovisual industry.

**Figure 5 – U.S./Canada Theater Admissions (millions)**



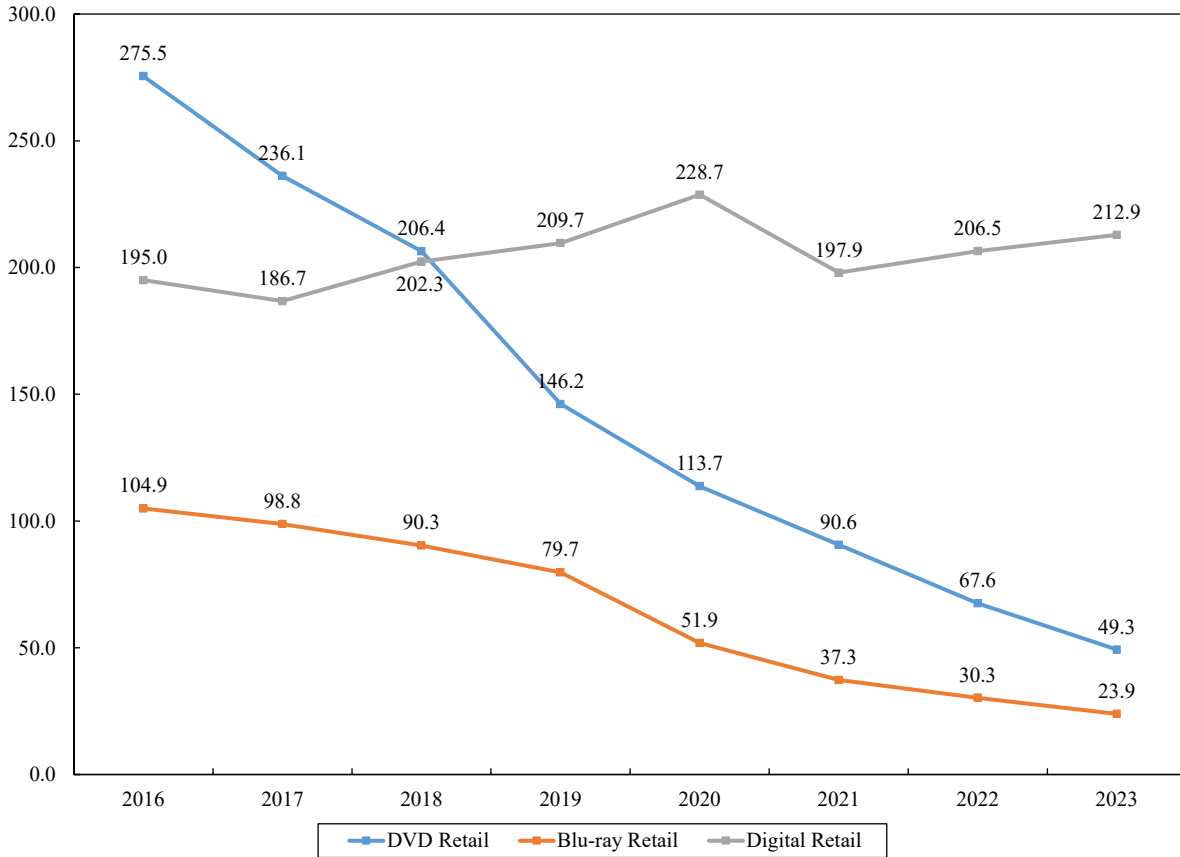
**Notes:** Theater admissions are calculated as Box Office divided by Average Ticket Prices.

**Sources:** Comscore (Box Office); National Association of Theater Owners (Average Ticket Prices).

The substitution by U.S. consumers from legacy formats to newer formats is evidenced by DVD/Blu-ray and digital forms of purchasing and renting content, such as motion pictures. Between 2016 and 2023, physical DVD and Blu-ray transactions declined, while the number of digital transactions increased. The same trends are seen in rental activity. Over time, the number of physical DVD and Blu-ray rentals has decreased, while digital

rentals have increased. See figures below. Retail and rental offerings are facing competition from streaming services and other OTT service offerings.

**Figure 6 – Number of Movie and TV Retail Transactions (millions)**

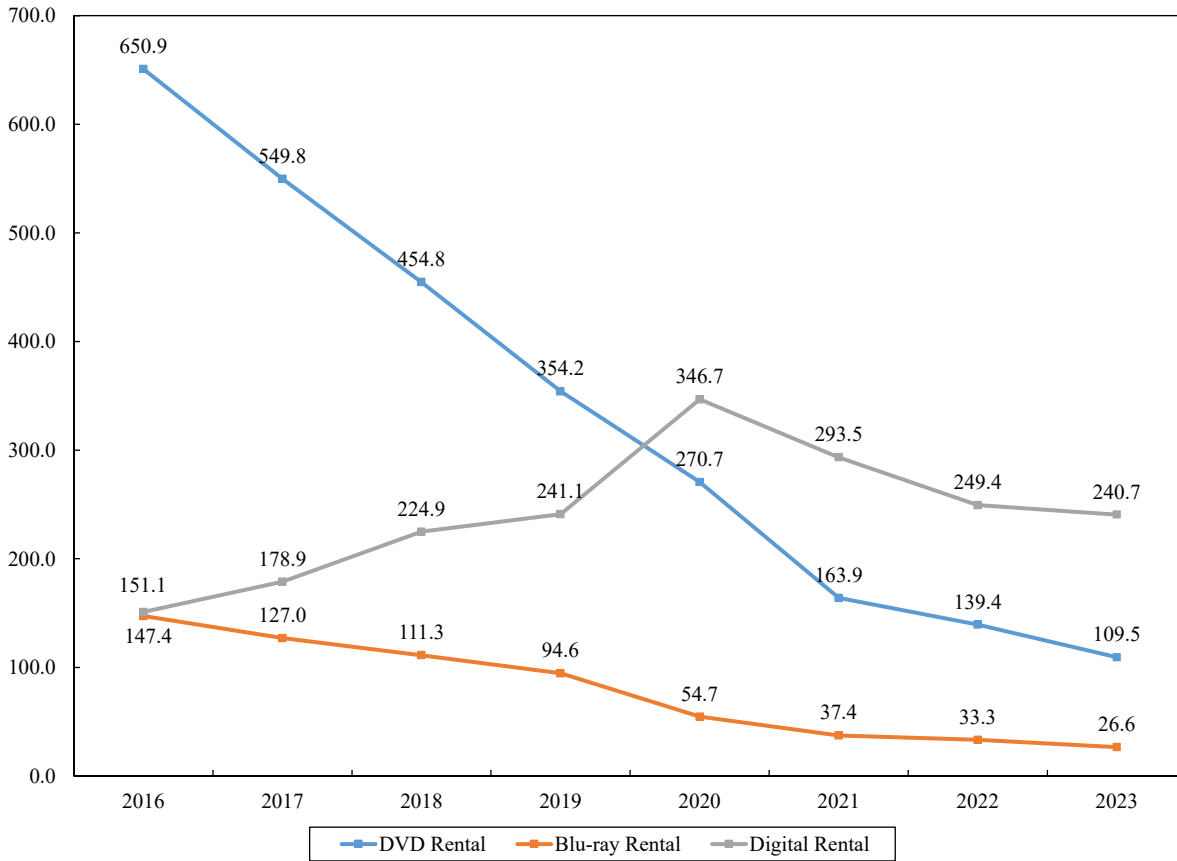


**Notes:** Digital retail purchase is a method of selling digital content that gives the customer “ownership.” Content may be downloaded or streamed. Digital purchase is also known as “download-to-own” (DTO), “electronic sell-through” (EST) and “digital sell through.” Digital transactions refer to the sum of single episodes and bundles (not episodes within bundles) sold.

**Source:** Omdia.



**Figure 7 – Number of Movie and TV Rental Transactions (millions)**



**Notes:** Digital rental is a method of renting digital content whereby customers choose content on an a-la-carte basis and pay to watch it for a limited period. Digital rental is also known as pay-per-view (PPV) and VOD. PPV content can be downloaded or streamed. Digital rental numbers exclude consumption within pay-TV set-top box (STB) or pay-TV VOD. Digital transactions refer to the sum of single episodes and bundles (not episodes within bundles) rented.

**Source:** Omdia.

As described earlier, consumers benefit from a highly dynamic marketplace that provides alternative, more convenient ways to consume audiovisual content—in particular online, or OTT, access to that content. As a result, online audiovisual consumption has grown substantially. Between 2016 and 2023, the number of online video subscriptions has quintupled from 115.5 million accounts to nearly 471 million accounts.<sup>50</sup> During the same

<sup>50</sup> Online audiovisual includes OTT video streaming services (e.g., Netflix and ESPN+) and vMVPDs (e.g., YouTube TV and Sling TV). Subscription refers to an active account to a subscription service, excluding free trials. For standalone services, this number represents active paying accounts at the end

period, the number of online movie views and transactions grew from about 10 million per year to almost 45 million per year, and the number of online series views and transactions grew from 79 million to over 390 million per year. And the number of online video households increased from approximately 73 million in 2016 to over 112 million in 2023. See figure below. The rapid reallocation of shares from traditional physical media and legacy media outlets to new technologies and new entrants is a key sign of healthy competition in this industry.<sup>51</sup>

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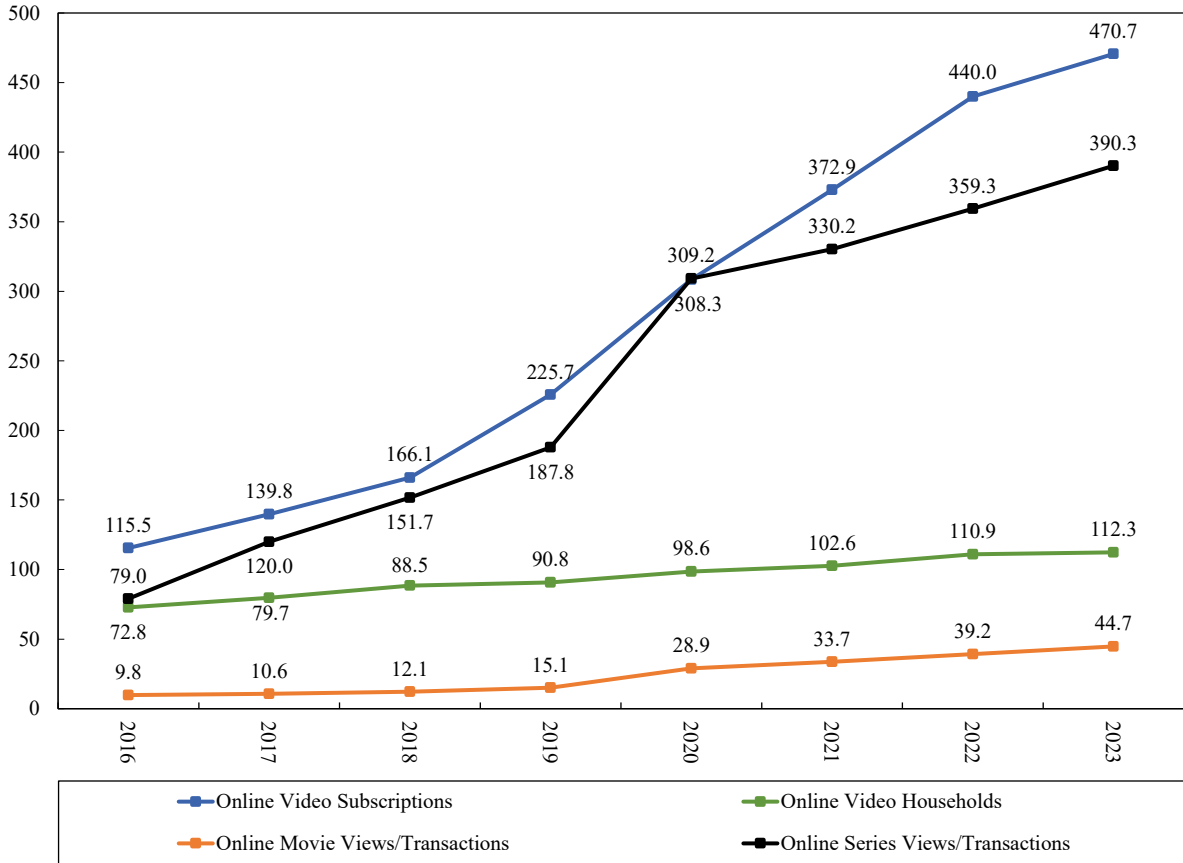
of the period. For bundled services, this number represents an account that has been used at least once in the last month of the period.

Online video households are the total number of households that subscribe and pay for one or more online video subscription services. It includes online channels and vMVPDs. It excludes advertising-based services that do not include a subscription fee.

Views/Transactions are the total transactional, ad-supported, and subscription views and transactions of series/movie content across online video subscription services. Views are calculated per month and include content delivered by near video on demand (nVOD), video on demand (VOD), internet protocol video on demand (IPVOD), and push video on demand (push-VOD). It excludes viewing of OTT-delivered content on a set-top box or connected TV.

<sup>51</sup> For estimates of the declines in MVPD subscribership, see Colin Dixon, “MVPD’s lost 2M subs in Q1 2024. Can SVOD bundles stop the rot?” *nScreenMedia*, May 20, 2024, available at <https://nscreenmedia.com/mvdpd-vmvdpd-q1-2024/>. Between 2016 and 2024 Q1, the number of U.S. households with cable, satellite, or telco TV declined from approximately 99 million to approximately 55 million, representing a decline of 44 percent during the period. See also Nielsen, “Streaming claims largest piece of TV viewing pie in July,” August 2022, available at <https://www.nielsen.com/insights/2022/streaming-claims-largest-piece-of-tv-viewing-pie-in-july/>. Streaming services’ share of U.S. TV viewership increased from 28.3 percent to 34.8 percent between July 2021 and July 2022, while cable and broadcast shares declined within the same period.

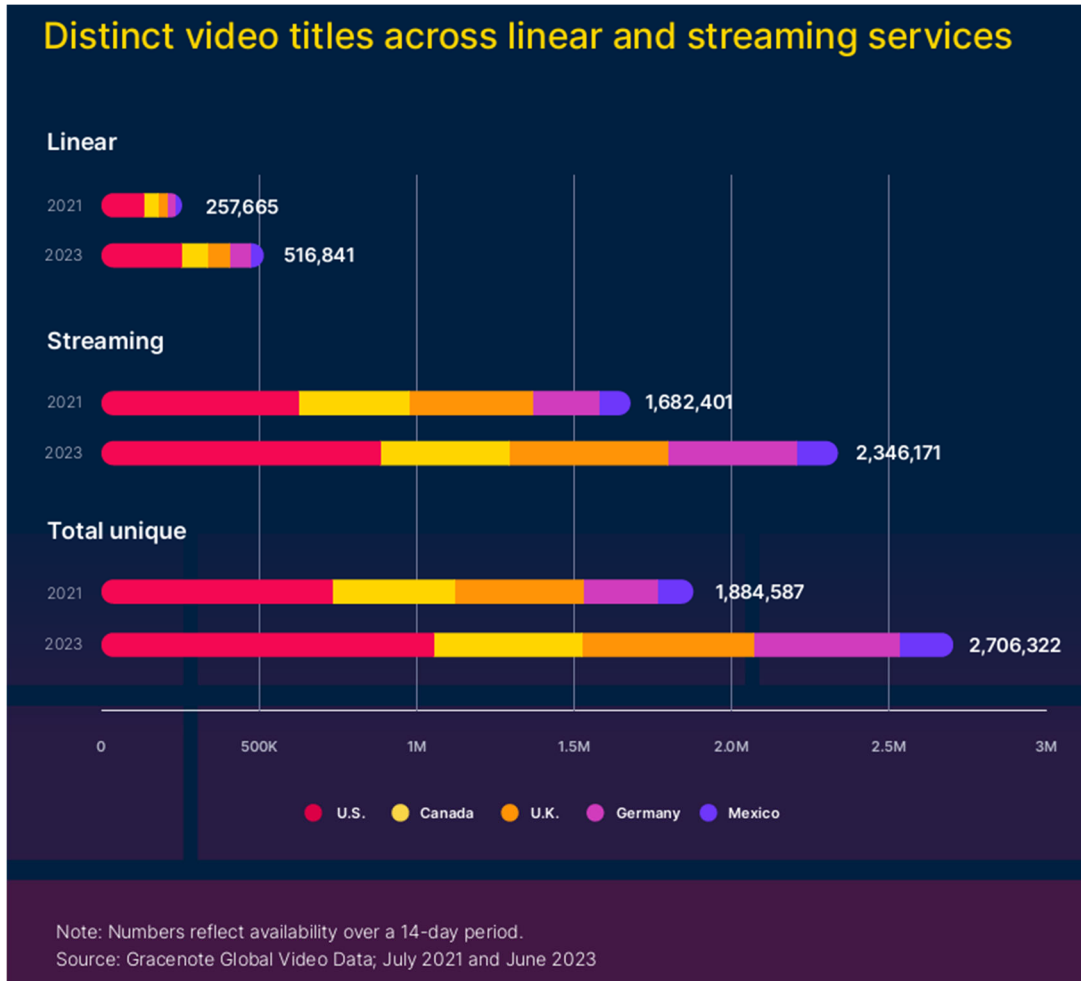
**Figure 8 – Participation in Online Video (millions)**



Source: Omdia.

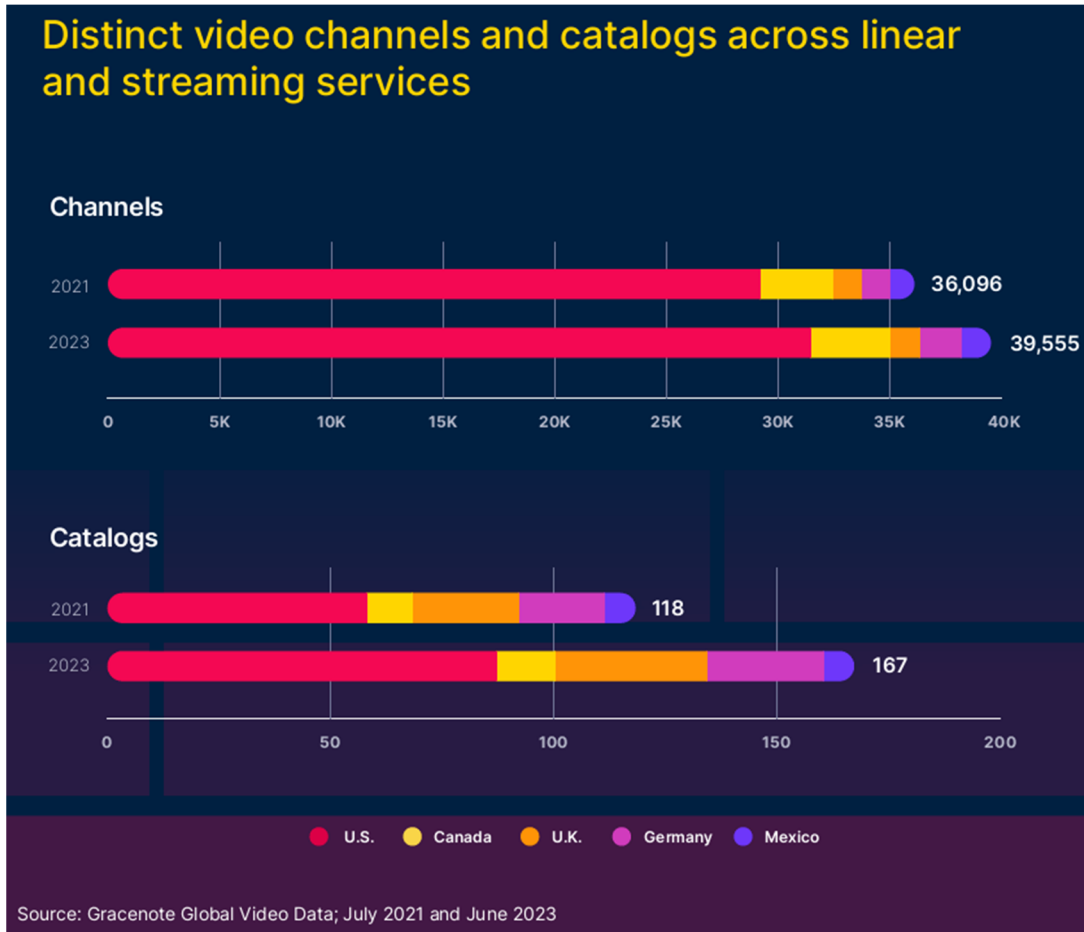
Another way to assess the choices available to consumers is by examining the amount and variety of content available to consumers in the marketplace. During just the two years between 2021 and 2023, the number of distinct audiovisual titles increased dramatically across both linear and streaming services. The number of distinct video channels and catalogs across both linear and streaming services also increased substantially between 2021 and 2023. See figures below reproduced from Nielsen.

Figure 9 – Distinct Video Titles



Source: Nielsen, “State of Play,” 2023, available at <https://www.nielsen.com/insights/2023/data-driven-personalization-2023-state-of-play-report/>, p. 3.

**Figure 10 – Distinct Video Channels and Catalogs**



**Source:** Nielsen, “State of Play,” 2023, available at <https://www.nielsen.com/insights/2023/data-driven-personalization-2023-state-of-play-report/>, p. 6.

Moreover, the number of OTT audiovisual content sites available in the United States has grown substantially. Between 2012 and 2024, the number of OTT audiovisual content sites available has nearly tripled from 76 to 211.<sup>52</sup> See figure below. These counts include a large variety of OTT sites from which consumers can access audiovisual content, such as YouTube TV, DirecTV Stream, Sling TV, fuboTV, Netflix, Hulu, Apple TV+, Amazon

<sup>52</sup> This represents the unique number of streaming sites with film or TV content accessible in the United States. These sites include subscription-based sites, electronic sell-through, advertising video-on-demand, and user-generated content sites (e.g., Facebook). Subscription and advertising video-on-demand sites make up the majority of total unique sites. Sites are counted by individual URLs (e.g., aetv.com, play.aetv.com, and aecrimecentral.com count as three separate sites), and are based on MPA’s criteria for counting a site—the site has movies and/or TV content. The counts exclude sports-only sites, such as NFL Game Pass.

Prime Video, Disney+, Max, Paramount+, Tubi, and Peacock, as well as more niche OTT services, and video-sharing and social media sites such as YouTube, Twitch, Facebook, and TikTok. Streaming services have enhanced quality for consumers by offering 4K content,<sup>53</sup> HDR technology,<sup>54</sup> advanced sound processing (e.g., Dolby Atmos),<sup>55</sup> content personalization algorithms,<sup>56</sup> and improved user interfaces.<sup>57</sup>

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<sup>53</sup> Netflix’s first 4K content became available in 2014. Since then, all Netflix original content has been produced in 4K. See Adrian Pennington, “Does Netflix’s 4K-Only Rule Limit the Creativity of Its Originals?,” *NAB Amplify*, July 13, 2021, available at <https://amplify.nabshow.com/articles/does-netflixs-4k-only-rule-limit-the-creativity-of-its-originals/>.

HBO Max (now rebranded as “Max”) added 4K content in 2020. See Chris Welch, “Wonder Woman 1984 will be the first title that HBO Max streams in 4K,” *The Verge*, December 1, 2020, available at <https://www.theverge.com/2020/12/1/21813364/wonder-woman-1984-4k-ultra-hd-dolby-vision-atmos-announced>.

Many other streaming services also offer 4K content. See, for example, Kourtnee Jackson, “Best Streaming Service for 4K Content,” *CNET*, August 4, 2024, available at <https://www.cnet.com/tech/services-and-software/best-streaming-services-for-4k-content/>.

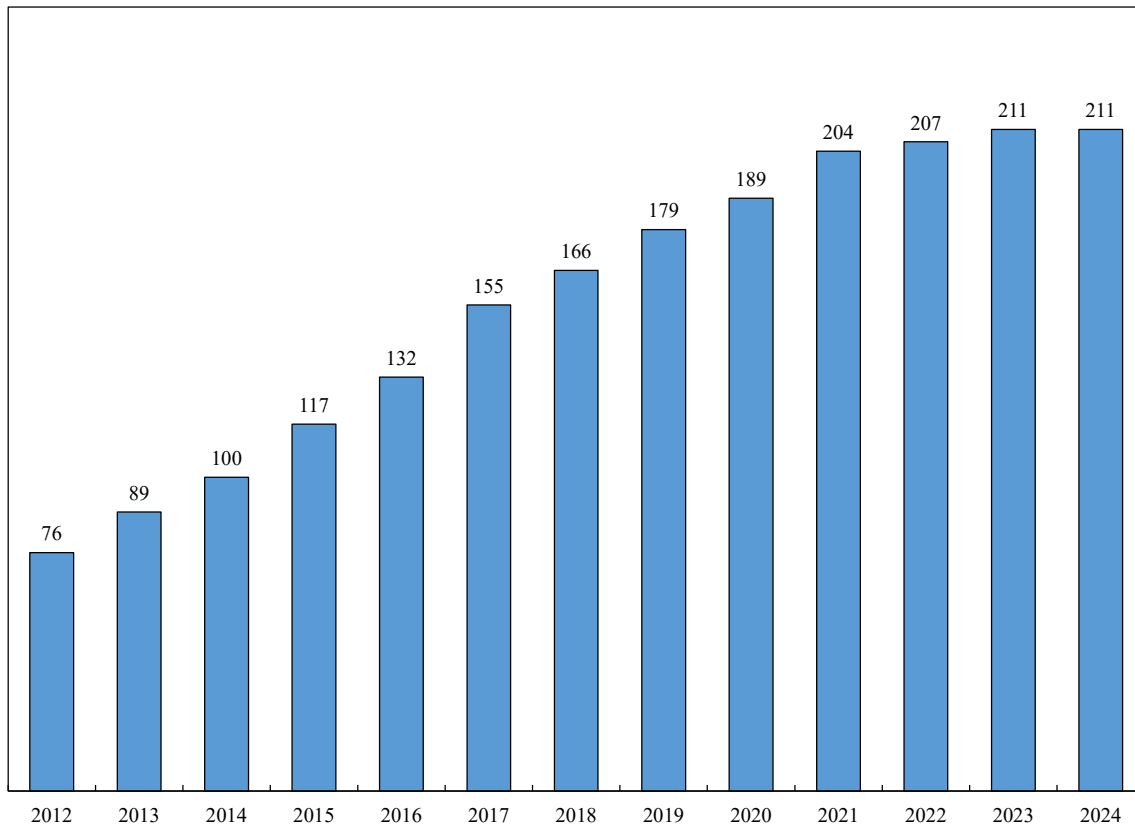
<sup>54</sup> See, for example, Al Griffin, “Netflix quietly rolled out an HDR upgrade for 4K TVs – here are the details,” *Techradar*, December 1, 2023, available at <https://www.techradar.com/televisions/netflix-quietly-rolled-out-an-hdr-upgrade-for-4k-tvs-here-are-the-details>; Apple, “About 4K, HDR, HDR10+, and Dolby Vision on your Apple TV 4K,” available at <https://support.apple.com/en-us/102339>.

<sup>55</sup> Dolby, “Where to watch content in Dolby Atmos,” available at <https://www.dolby.com/experience/home-entertainment/faqs/where-to-watch-content-in-dolby-atmos/>.

<sup>56</sup> Netflix, “How Netflix’s Recommendations System Works,” available at <https://help.netflix.com/en/node/100639>; Hulu, “Personalization Features on Hulu,” available at <https://help.hulu.com/article/hulu-personalized-recommendations>.

<sup>57</sup> Todd Spangler, “Amazon Is Giving Prime Video’s User Interface a Much-Needed Redesign,” *Variety*, July 18, 2022, available at <https://variety.com/2022/digital/news/amazon-prime-video-redesign-user-interface-1235317952/>.

**Figure 11 – Number of Film/TV Unique Sites, United States**



**Notes:** 2024 reflects data as of Q1 2024. Website counts excludes all websites with a general content focus of “Sport” or “Sports.” Social media websites (Facebook, Google, TikTok, Twitch, and YouTube) are included.

**Source:** Compass Lexecon and MPA analysis of Omdia data.

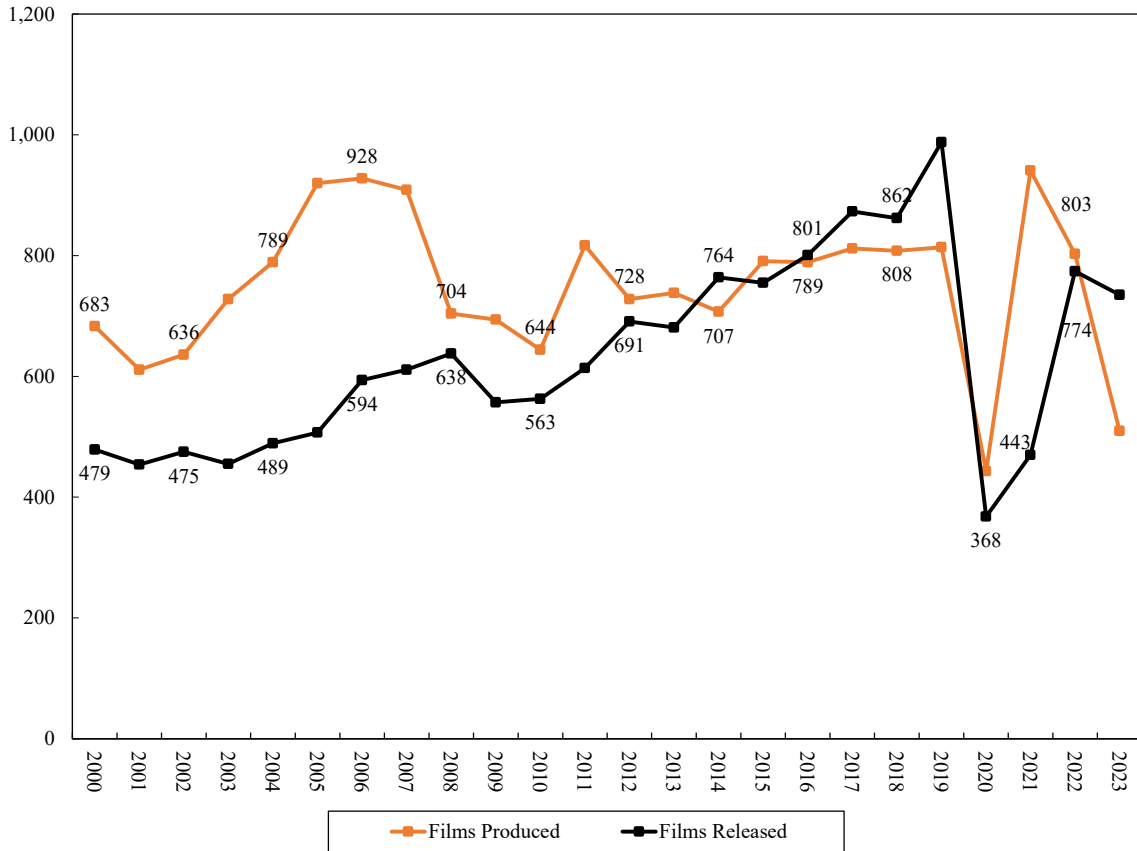
The number of motion picture films produced, which includes films that were intended to be released in theaters or on streaming services, increased between 2000 and 2007, but suffered during the Great Recession that started in 2008, and declined substantially during the COVID-19 pandemic.<sup>58</sup> Films released in the United States, which include films shown in theaters for the first time in a given year, and re-releases, generally increased from 2000 to

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<sup>58</sup> Figures are based on data collected by MPA. Feature films entering production reflect full-length feature films in English that began production in the reported year by a U.S. production company (including co-productions). The counts include films that were made for or by an online video service, but do not include student films, documentaries, films created for straight-to-DVD or Blu-ray release.

2019, but also declined substantially during the COVID-19 pandemic.<sup>59</sup> There was also a marked decline in films produced and released in 2023 due to the labor strikes. See figure below.

**Figure 12 – Films Produced & Released**



**Notes:** Films released includes both new and reissued films.

**Sources:** Comscore; MPA.

The amount of content produced generally has increased over time. The number of scripted original series, total original series, and online exclusive films increased between

<sup>59</sup> Figures are based on data reported by Comscore – Box Office Essentials. It includes all titles that opened and earned any studio reported U.S./Canada box office revenue in theaters in the year. Historical data is regularly updated by Comscore. New feature films include films released domestically for the first time, while re-releases include any film released for the first time in previous years including anniversary releases and double-features. Non-feature films include Oscar shorts, TV shows, and event showings. Films produced and released are not a matched dataset. For example, films released includes international films released in the United States and films produced includes films that have not yet released in theaters, including films made for streaming services.



2016 and 2022.<sup>60</sup> However, due to the 2023 labor strikes, the number of series and online exclusive films that were produced and distributed declined. See figure below.

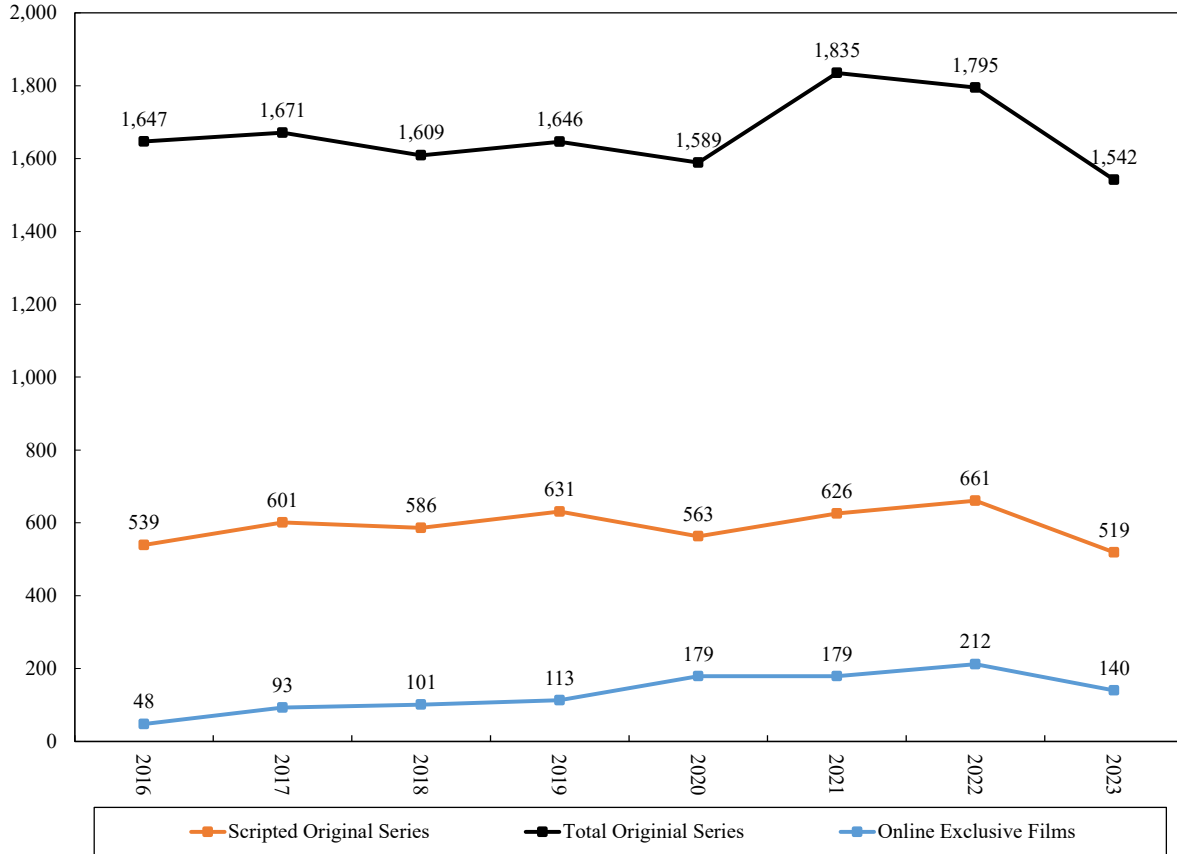
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<sup>60</sup> Figures are based on data collected by MPA. Scripted original series are full-length original scripted series in the English language released in the reported year by a U.S. production company (including co-productions). These estimates cover broadcast, cable, and online outlets. They exclude library, daytime dramas, one-episode specials, non-English language/English-dubbed, children’s programs, and short-form content (<15 mins.). Estimates are compiled based on a number of sources, such as MPA member studios, film offices, and third-party sources, including Ampere Analysis and Variety Insight.

Total original series are full-length original scripted and unscripted series in the English language released in the reported year by a U.S. production company (including co-productions). Compiled based on a number of sources, including MPA member studios, film offices, and third-party sources, including Ampere Analysis and Variety Insight. In addition to scripted original series, these estimates include daytime dramas, children’s programs, and unscripted series including news and talk shows. Multiple seasons of a series in one year are counted only once.

Online exclusive films are full-length (greater than 70 minutes) original films that were released exclusively in the United States on the following streaming services: Amazon Prime Video, Apple TV+, Discovery+, Disney+, Hulu, Max, Netflix, Paramount+, Peacock, and Shudder. Films with any theatrical release, including limited release, are not included.

**Figure 13 – Original Series and Online Films Released**



**Source:** MPA.

Finally, there is a vast amount of short-form audiovisual content available to consumers. As described earlier, such short-form content is increasingly becoming an important aspect of the audiovisual consumption experience for consumers. Because users can generate and post their own content, the number of short-form videos released on social media platforms and OTT video-sharing sites is significantly higher than that of long-form content released through streaming services or theaters. One source estimates that about 34

million videos are posted on TikTok on a daily basis.<sup>61</sup> Similarly, another source estimates that there are currently 14 billion public videos available on YouTube.<sup>62</sup>

#### **D. Prices in the Audiovisual Industry Are Consistent with Pricing Expected in a Dynamic and Highly Competitive Industry**

Another outcome to examine in an assessment of the competitive health of an industry is pricing to consumers. In analyzing prices, it is important to account for changing quality, technology, and investment to quantify the full outcome for consumers. Economists typically use the metric of consumer welfare to balance the effects of changing prices, quality, and technology. While a full consumer welfare analysis is outside the scope of this report, the analysis presented below shows that prices in real terms in the audiovisual industry—including Blu-ray and DVD, digital transactions, streaming services, and MVPDs—are consistent with pricing expected in a dynamic and highly competitive industry. Several of the most prominent types of video content are free to consumers, including broadcast television, free ad-supported streaming services like Pluto and Tubi, and YouTube.

We begin with one area where prices have increased. Movie theater ticket prices in real terms have increased by under one percent per year between 2000 and 2022. See figure below. However, over time, the theater experience for consumers has changed with innovative viewing formats, such as 3D viewing experiences and premium large-format viewing experiences (e.g., IMAX).<sup>63</sup> Improved theater experiences and higher quality

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<sup>61</sup> Raj Vardhman and Florence Desiata, “13 Insightful Statistics on How Many Videos are Uploaded to TikTok Daily,” *Tech Jury*, November 17, 2023, available at <https://techjury.net/blog/how-many-videos-are-uploaded-to-tiktok-daily/>.

<sup>62</sup> Ryan McGrady, “What We Discovered on ‘Deep YouTube,’” *The Atlantic*, January 26, 2024, available at <https://www.theatlantic.com/technology/archive/2024/01/how-many-videos-youtube-research/677250/>.

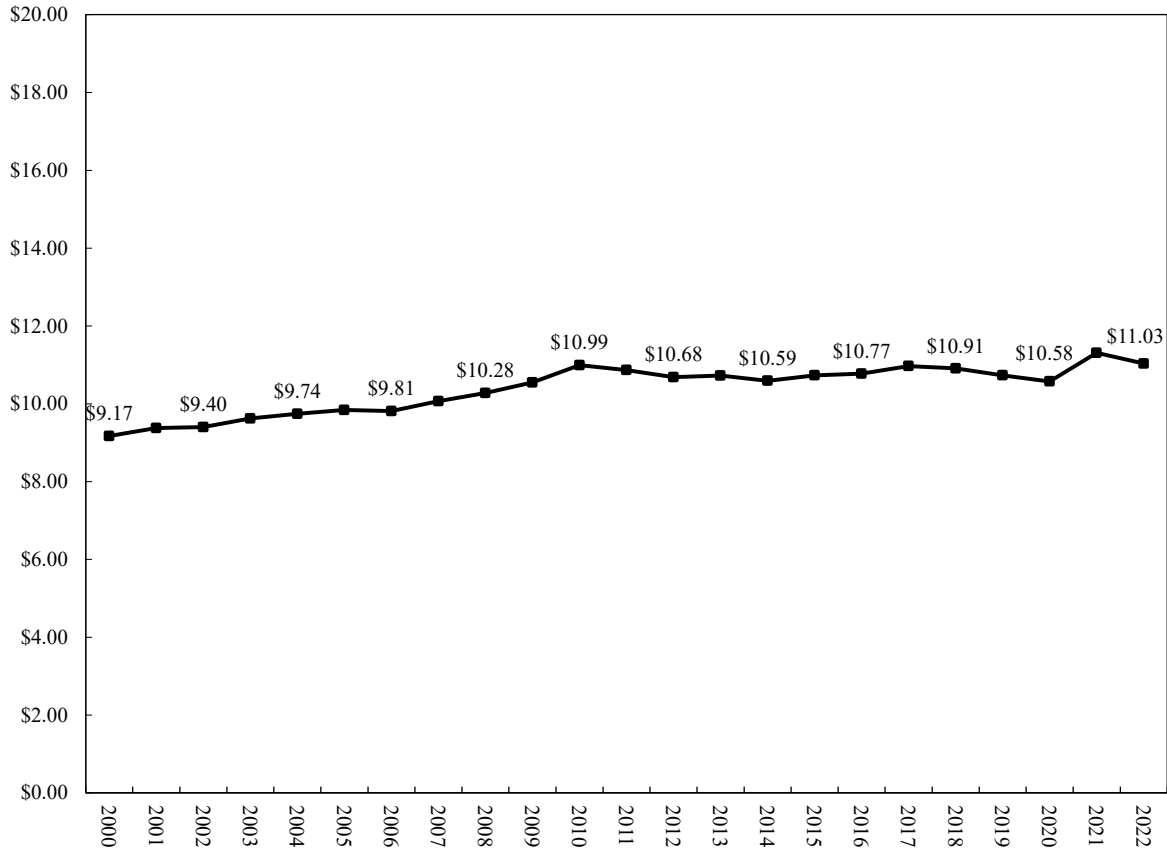
<sup>63</sup> Filmgrail, “Cinema Experience Reimagined: Engaging the Modern Audience,” December 6, 2023, available at <https://filmgrail.com/blog/cinema-experience-reimagined-engaging-the-modern-audience/>. See also, Daniel Loria, CinemaCon 2022: Tech Providers Innovate Beyond the Pandemic, *Box Office*, April 26, 2022, available at <https://www.boxofficepro.com/innovating-beyond-the-pandemic-cinema-technology-providers-are-ready-to-meet-audience-demand-with-the-industrys-latest-innovations/>; Sergio Julian Gomez, “5 technologies that will mark (or not) the future of movie theaters,” *Panorama Audiovisual.com*, June 9, 2022, available at <https://www.panoramaaudiovisual.com/en/2022/06/09/5-tecnologias-marcaran-futuro-salas-cine/> (discussing various technological advancements that has helped improved movie theatre experiences, such as 4DX, LED projectors, High Frame Rate scenes).

production of motion pictures should be taken into account when examining movie theater ticket prices over time. Although real theater prices have increased slightly, a full analysis of quality-adjusted theater prices would account for changing quality and declining demand due to improved at-home viewing experience from low-cost, large-screen, high-definition television sets.<sup>64</sup>

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<sup>64</sup> Between January 2014 and December 2023, CPI data shows that the price of televisions decreased by almost 75 percent. (Source: Bureau of Labor Statistics, Televisions, U.S. city average, all urban, seasonally adjusted (series CUSR0000SERA01).) The trend towards large TV screens—namely one in every five produced worldwide measuring 60 inches or larger—is partly attributable to consumers “mimic[ing] the cinema experience while in the comfort of [their] own home” especially when combined with the availability of multiple streaming services. See “Why TV Screens Are Going Extra Large,” *Wired Insider* (originally published by *Wired UK*), available at <https://www.wired.com/sponsored/story/why-tv-screens-are-going-extra-large/>. Omdia reports that the weighted average size of televisions had grown to 52 inches by September 2023. See David Hsieh, “The weighted average size of shipped LCD TV displays shifted to 52 inches in September 2023,” *Omdia*, November 8, 2023, available at <https://omdia.tech.informa.com/blogs/2023/nov/the-weighted-average-size-of-shipped-lcd-tv-displays-shifted-to-52-inches-in-september-2023>.

**Figure 14 – U.S. Movie Theater Ticket Prices (2023 dollars)**

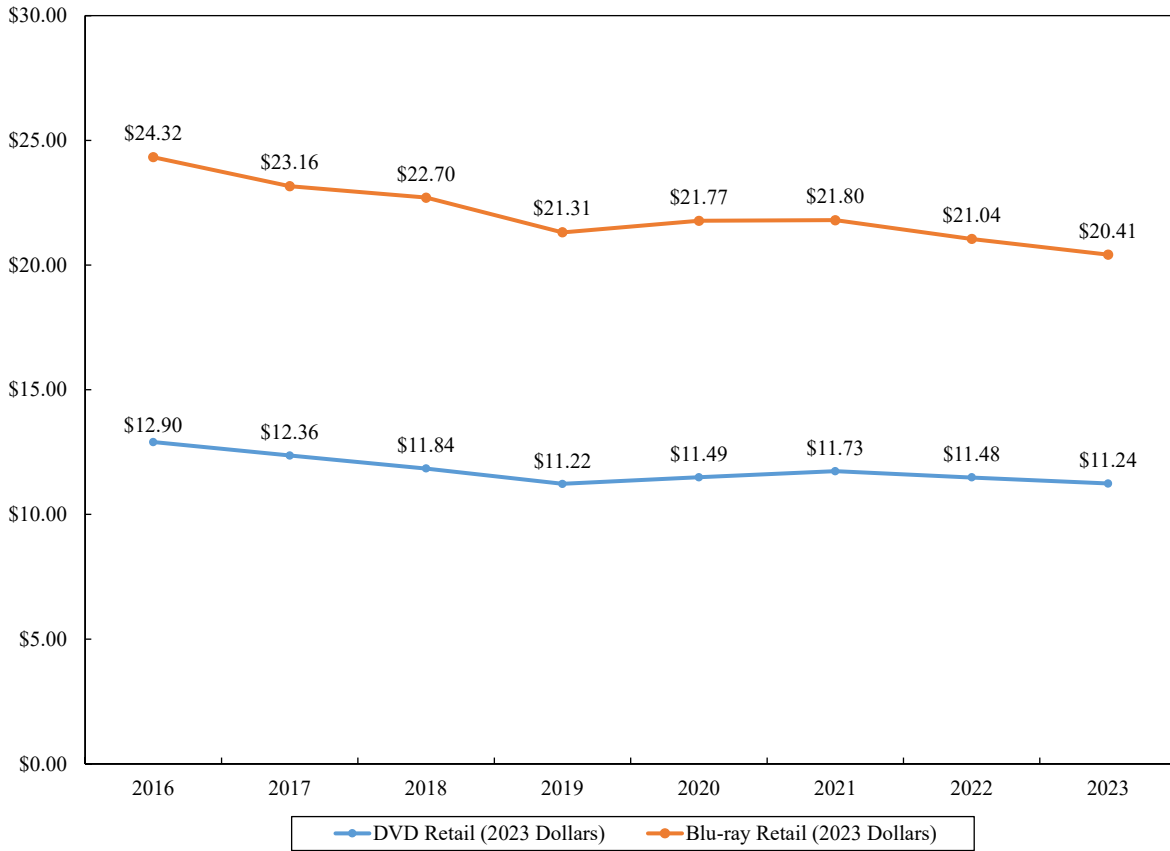


**Notes:** Prices adjusted to 2023 dollars using U.S. Bureau of Labor Statistics CPI All Items (excl. food & energy).

**Sources:** National Association of Theatre Owners; U.S. Bureau of Labor Statistics (series CUUR0000SA0L1E).

Next, consider retail prices for DVDs, Blu-ray, and digital video rentals. DVD and Blu-ray retail prices in real terms declined between 2016 and 2023. Digital video retail prices also have declined during the same period. Also, DVD and Blu-ray rental prices in real terms declined between 2016 and 2023. The real price for digital video rentals also decreased during the period. See figures below.

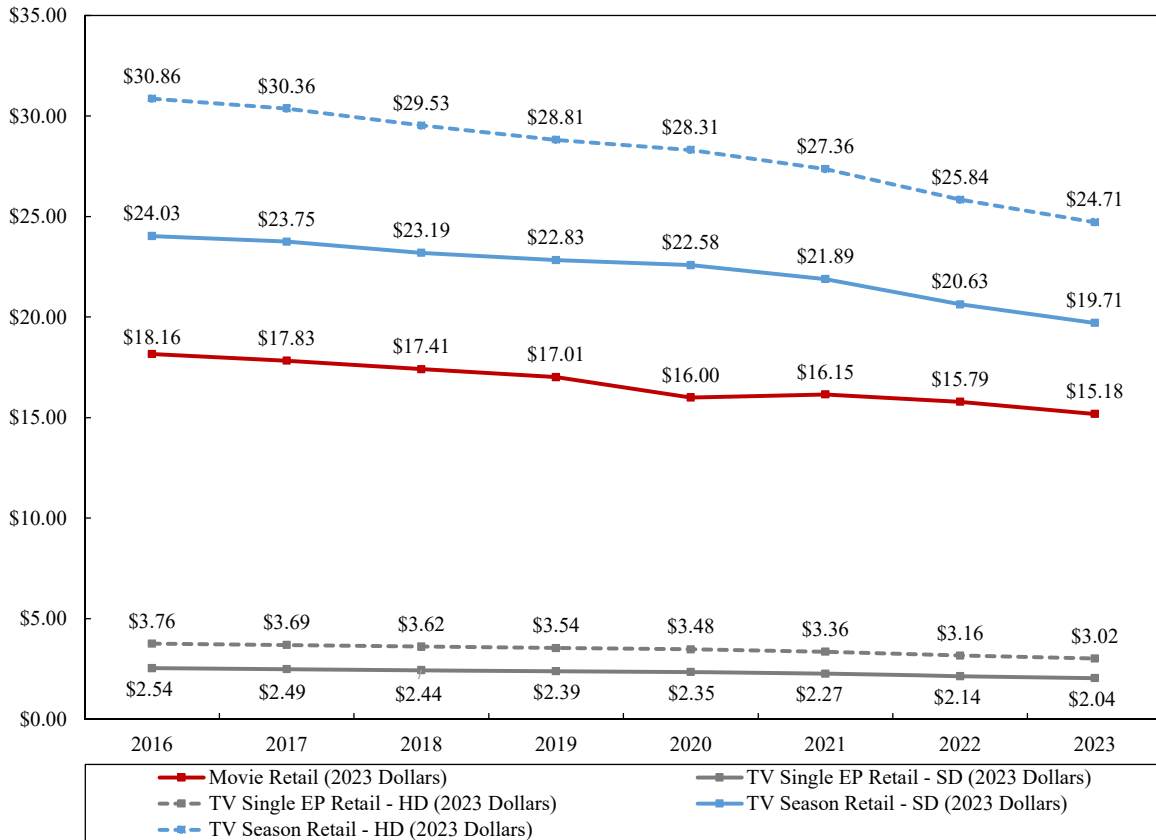
**Figure 15 – Average Movie and TV Retail Prices, DVD and Blu-ray**



**Notes:** Prices adjusted to 2023 dollars using U.S. Bureau of Labor Statistics CPI All Items (excl. food & energy).

**Sources:** Omdia; U.S. Bureau of Labor Statistics (series CUUR0000SA0L1E).

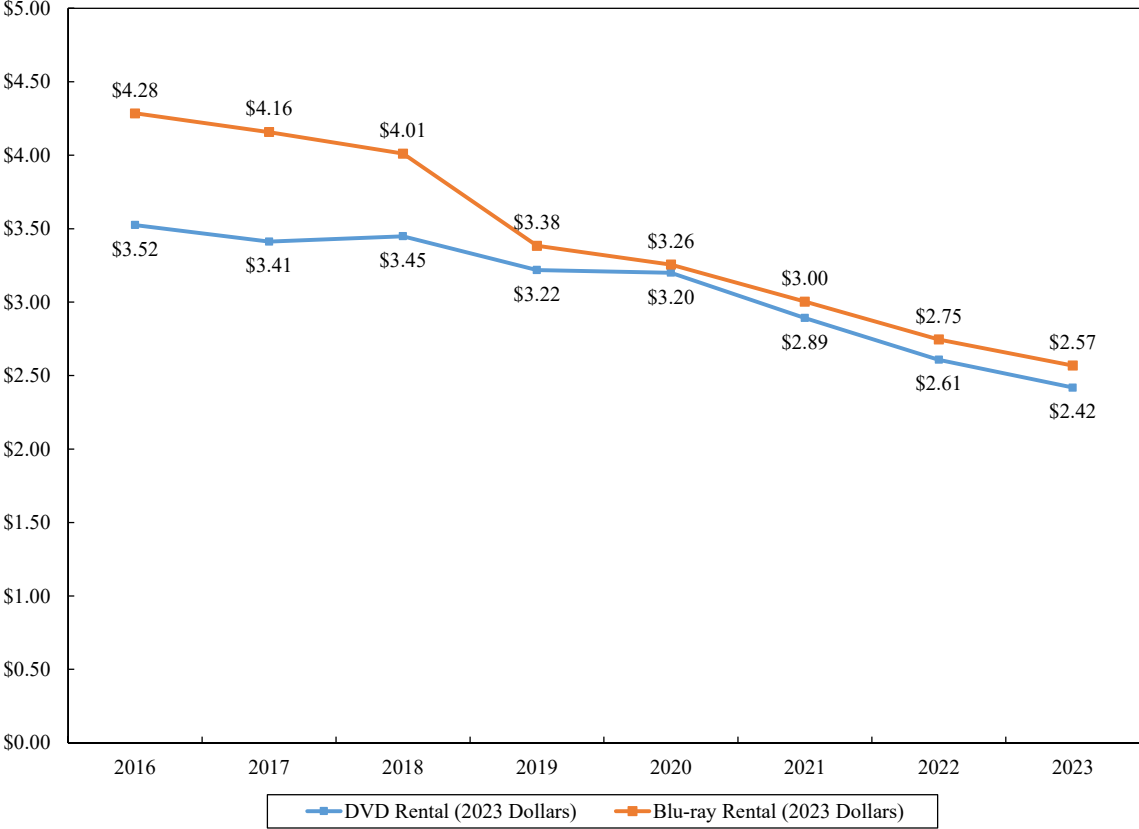
**Figure 16 – Average Movie and TV Retail Prices, Digital**



**Notes:** Prices adjusted to 2023 dollars using U.S. Bureau of Labor Statistics CPI All Items (excl. food & energy).

**Sources:** Omdia; U.S. Bureau of Labor Statistics (series CUUR0000SA0L1E).

**Figure 17 – Average Movie and TV Rental Prices, DVD and Blu-ray**

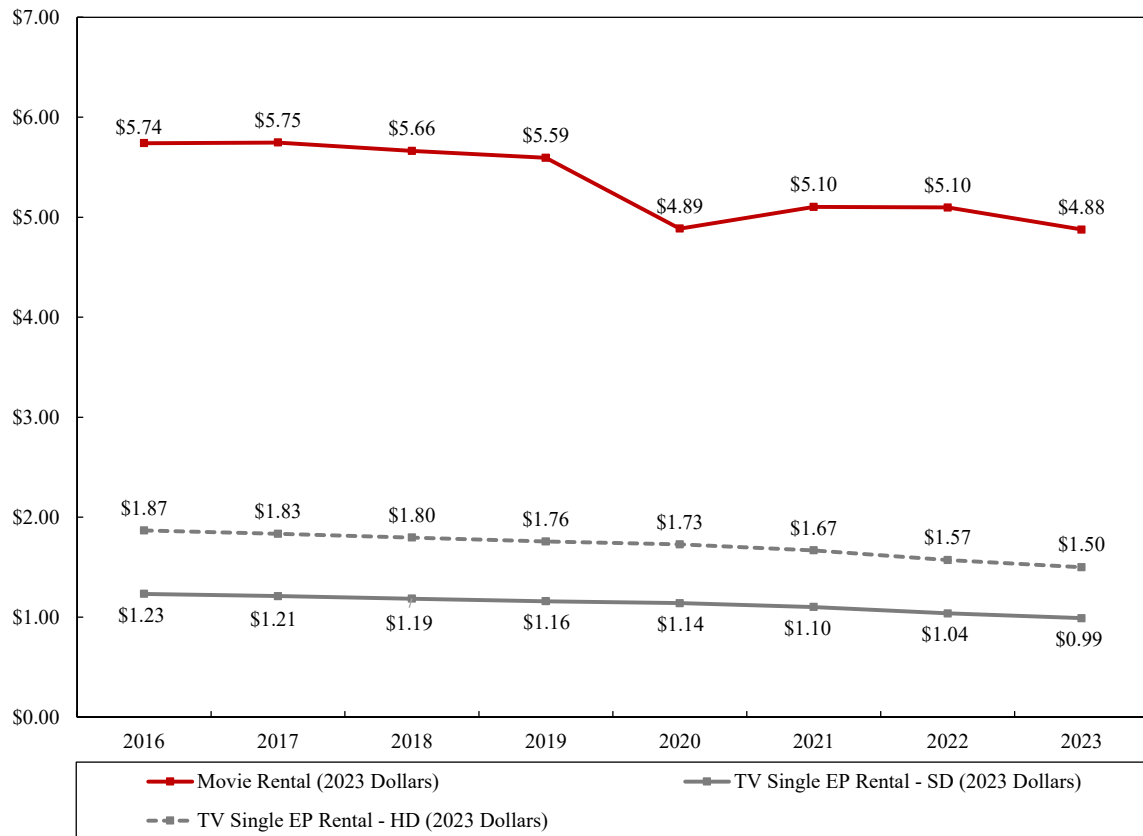


**Notes:** Prices adjusted to 2023 dollars using U.S. Bureau of Labor Statistics CPI All Items (excl. food & energy).

**Sources:** Omdia; U.S. Bureau of Labor Statistics (series CUUR0000SA0L1E).



**Figure 18 – Average Movie and TV Rental Prices, Digital**



**Notes:** Prices adjusted to 2023 dollars using U.S. Bureau of Labor Statistics CPI All Items (excl. food & energy).

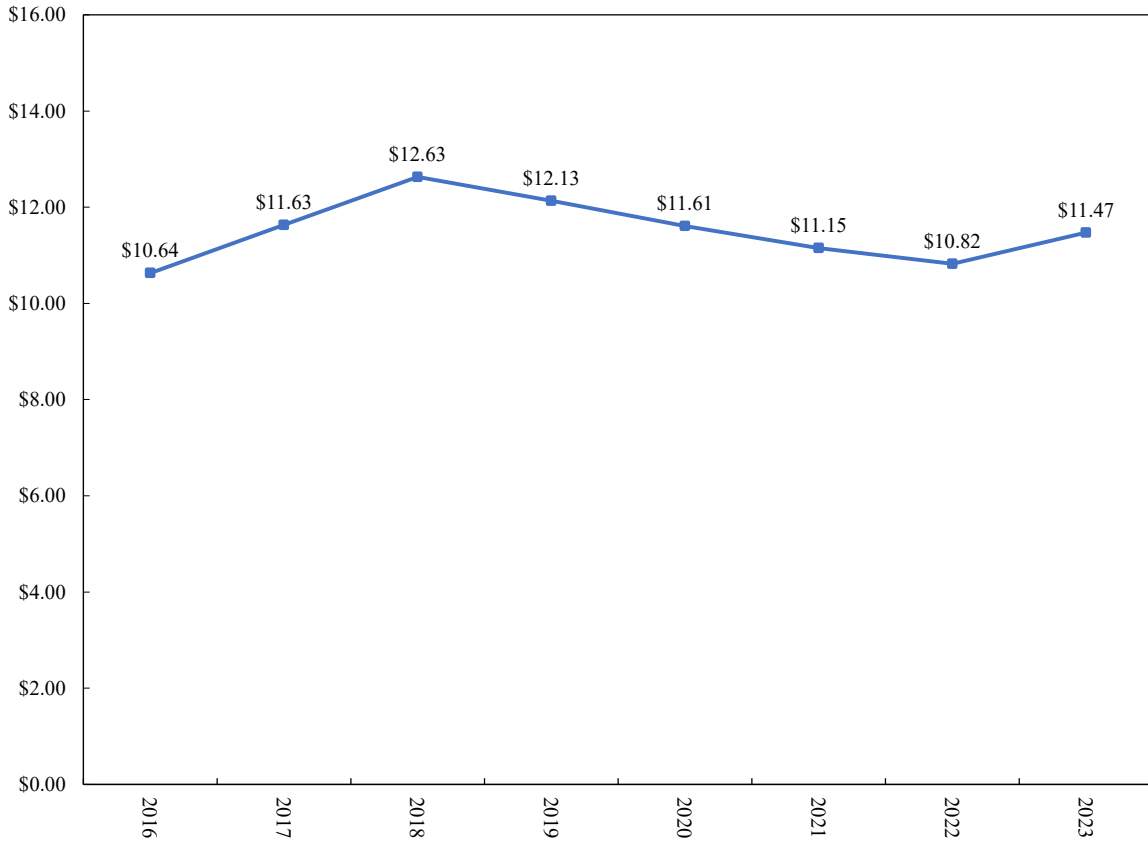
**Sources:** Omdia; U.S. Bureau of Labor Statistics (series CUUR0000SA0L1E).

Average revenue per unit (ARPU)—often used by economists as a measure of approximate effective prices paid by consumers—in real terms for online video services, which includes OTT streaming services (e.g., Netflix and ESPN+) and vMVPDs (e.g., YouTube TV and Sling TV), declined between 2018 and 2022, and increased by about one percent per year between 2016 and 2023.<sup>65</sup> See figure below. Service-delivery improvements, technological developments such as the rollout of 4K Ultra HD content on

<sup>65</sup> ARPU is the average revenue per subscriber per month, including both subscription revenues and/or advertising revenues. For example, Netflix offers various subscription plans ranging from \$6.99 per month with ads, to \$22.99 per month (see Netflix, “Choose the plan that’s right for you,” available at <https://www.netflix.com/signup/planform>). Netflix’s ARPU would be calculated as the sum of all revenues in a month divided by the total number of subscribers across all plans in that month.

many services, and the amount and variety of content available on streaming services are improvements in quality, but are not accounted for in ARPU.<sup>66</sup>

**Figure 19 – U.S. Online Video Average Revenue Per User (2023 dollars)**



**Notes:** Prices adjusted to 2023 dollars using U.S. Bureau of Labor Statistics CPI All Items (excl. food & energy). Online Video ARPU is the average revenue per unit and is equivalent to the average revenue generated by each subscriber in a given period. Omdia calculates OTT video ARPU using OTT subscription revenue and average OTT subscribers during the period.

**Sources:** Omdia; U.S. Bureau of Labor Statistics (series CUUR0000SA0L1E).

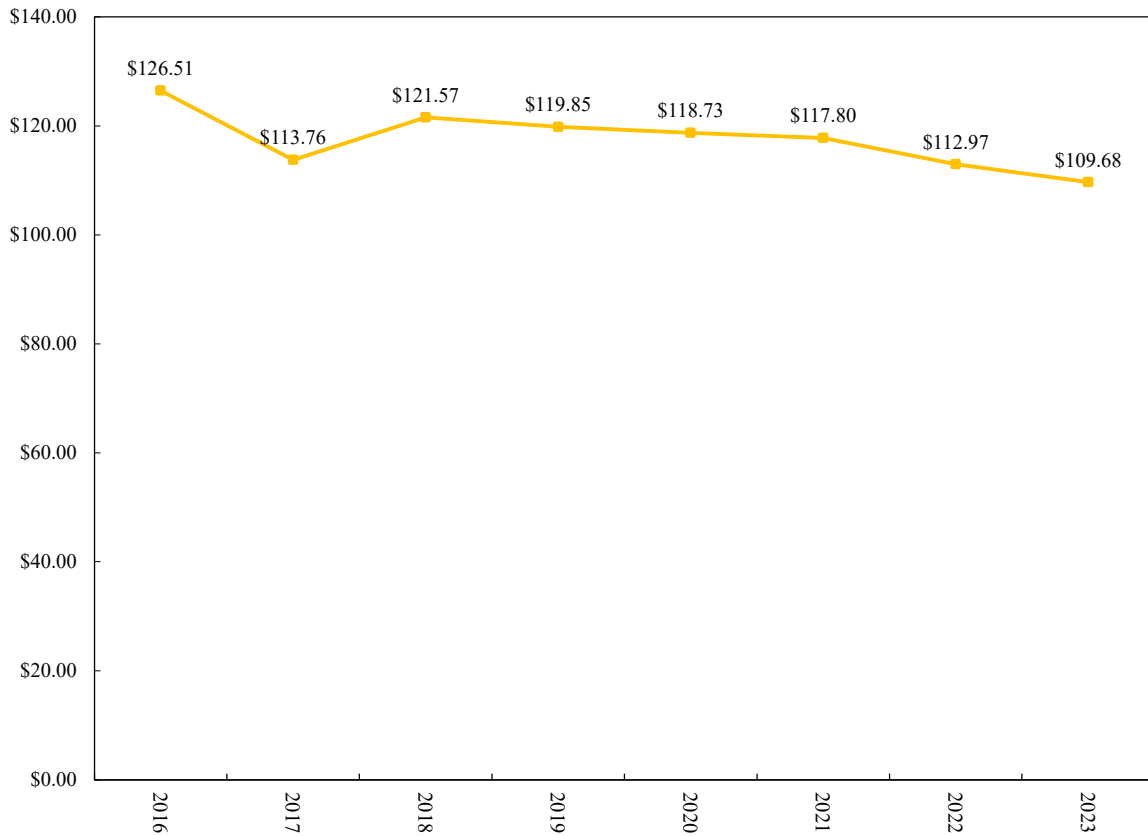
ARPU in real terms for MVPDs, which includes cable companies (e.g., Comcast and CableOne), satellite (e.g., Dish and DirecTV), and IPTV (e.g., Frontier and AT&T U-Verse TV), declined by approximately two percent per year from 2016 to 2023. See figure below.

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<sup>66</sup> As described in Section III.C above, OTT streaming services have made various advancements over the past decade, both in terms of the quality of the video and audio delivered to viewers, as well as the quality of the user interfaces of the streaming platforms, making it easier for users to quickly find content.

As shown earlier, consumers have been increasing subscriptions to OTT services and decreasing subscriptions to MVPDs which indicates a healthy competitive process for video entertainment.

**Figure 20 – U.S. MVPDs Average Revenue Per User (2023 dollars)**



**Notes:** Prices adjusted to 2023 dollars using U.S. Bureau of Labor Statistics CPI All Items (excl. food & energy).

**Sources:** Omdia; U.S. Bureau of Labor Statistics (series CUUR0000SA0L1E).

In conclusion, new technologies and distribution channels and services in the audiovisual industry have emerged over the past two decades in response to technological and innovation shocks to the industry. The empirical evidence documented in this section establishes that competition in the audiovisual industry, as exhibited through the reallocation of share to new technologies and services, is robust. There is substantial evidence of entry and innovation, growing output and quality, and pricing consistent with a dynamic and highly competitive industry.

#### IV. THE AUDIOVISUAL INDUSTRY EXHIBITS SIGNS OF A WELL-FUNCTIONING LABOR MARKET

This section presents economic analyses supporting that the audiovisual industry exhibits signs of being a well-functioning labor market, which provides benefits to workers within the industry.

As described above, there has been a shift in audiovisual content production and consumption towards new OTT distribution technologies. This shift has lowered barriers to entry for entertainment talent to reach consumer audiences. In addition, unionization in the audiovisual industry gives workers collective bargaining power to negotiate employment terms with production and streaming companies, including the members of AMPTP, the collective bargaining organization responsible for negotiating industry-wide guild and union contracts.<sup>67</sup> The unions have claimed great success from their recent negotiations.<sup>68</sup> Strong union representation contributes to favorable outcomes for workers in the audiovisual industry.

This section analyzes key metrics with respect to labor markets—employment levels and wages—to assess the health of the labor market. The empirical evidence shows stable employment levels and stable or increasing wages in the audiovisual industry, and points to an audiovisual labor market that is functioning in a healthy manner.

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<sup>67</sup> Alliance of Motion Picture and Television Producers, “Welcome,” available at <https://www.amptp.org/>. As described earlier, members of AMPTP, which includes MPA’s members, negotiate with more than 45 unions, operating under 64 collective-bargaining agreements.

<sup>68</sup> WGA, “The Campaign,” available at <https://www.wgacontract2023.org/the-campaign/what-we-won>; Lisa Richwine and Dawn Chmielewski, “Hollywood writers guild ends strike ahead of final contract vote,” *Reuters*, September 27, 2023, available at <https://www.reuters.com/world/us/hollywood-writers-guild-calls-end-strike-wednesday-2023-09-27/> (“The WGA said the estimated value of the deal was \$233 million per year. [...] Writers appeared to have won concessions across the board, with raises over the three years of the contract, increased health and pension contributions, and AI safeguards.”).

Suzy Woltmann, “Everything You Need to Know About the SAG-AFTRA + AMPTP Negotiations,” *Backstage*, December 6, 2023, available at <https://www.backstage.com/magazine/article/sag-aftra-strike-negotiations-explained-76246/> (“According to SAG, the new three-year deal is valued at more than \$1 billion, and includes “above-pattern’ minimum compensation increases, unprecedented provisions for consent, and compensation that will protect members from the threat of AI.’ The deal also comes with additional compensation for streaming shows, a boost in pension and health caps, and increased pay for background performers.”).

## **A. Employment in the Motion Picture and Television Industry Does Not Indicate an Adverse Labor Market for Workers**

Based on data from MPA, the audiovisual industry directly employed approximately 900,000 people nationwide between 2016 and 2019.<sup>69</sup> MPA typically categorizes and analyzes wages in the audiovisual industry under two categories: production and distribution.<sup>70</sup> Nationwide employment in both categories has been stable over time. See figure below.<sup>71</sup> The exception occurred during the COVID-19 pandemic, in which both production and distribution roles saw substantial declines in employment reflecting restrictions forcing production studios to pause production-related activity, and traditional distribution channels to shutter.<sup>72</sup>

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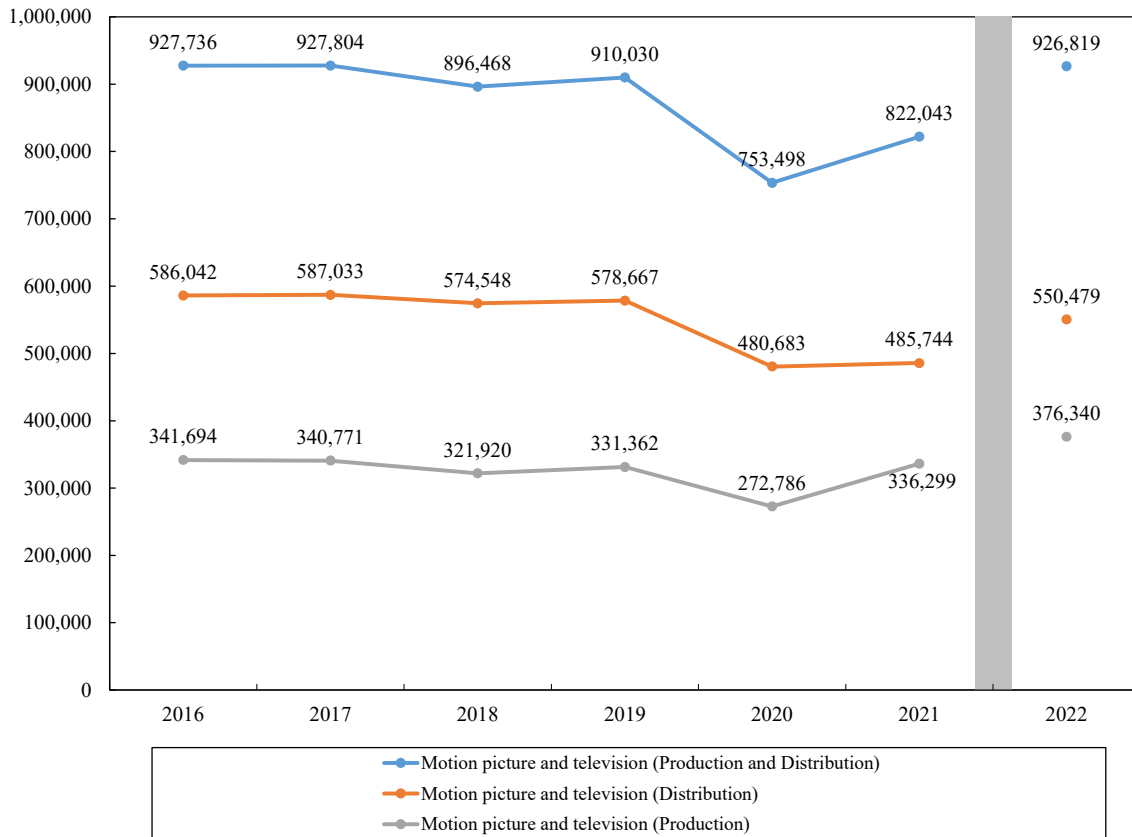
<sup>69</sup> MPA, “The American Motion Picture And Television Industry Creating Jobs, Trading Around The World,” 2022, available at [https://www.motionpictures.org/wp-content/uploads/2024/03/MPA\\_Economic\\_contribution\\_US\\_infographic-1.pdf](https://www.motionpictures.org/wp-content/uploads/2024/03/MPA_Economic_contribution_US_infographic-1.pdf). Direct employees are employees who directly participate in the motion picture and television industry, such as production staff, movie theater staff, and television broadcasting staff.

<sup>70</sup> Production-related roles are those that involve producing, marketing, and manufacturing motion pictures, television shows, and audiovisual content. Distribution-related roles are those related to distributing motion pictures, television shows, and audiovisual content to consumers. See *Id.* and Section II.

<sup>71</sup> 2022 NAICS code revisions introduced code 516210 (Media Streaming Distribution Services, Social Networks, and Other Media Networks and Content Providers), which replaced and consolidated many existing NAICS codes related to distribution. Prior to this change, MPA analysis estimated the share of each NAICS category that was related to production or distribution of motion pictures and television. This methodology underestimated distribution-related industry wages because the categories were overweighted by lower-wage roles, despite motion picture and television roles generally paying substantially more. As a result of the 2022 NAICS revisions, the new category more closely aligns with the motion picture and television roles related to distribution and is now mostly comprised of the higher-paying motion picture and television roles. Consequently, while the NAICS code revisions did not have substantial effects on employment level data, the wage data for distribution-related roles now more accurately represents wages in the industry. Comparisons between 2021 and 2022 should be avoided. See NAICS Association, “516210 - Media Streaming Distribution Services, Social Networks, and Other Media Networks and Content Providers,” available at <https://www.naics.com/naics-code-description/?v=2022&code=516210>.

<sup>72</sup> Nellie Andreeva, “Los Angeles Production Grinds To A Halt Amid Covid-19 Surge; Netflix Is Latest Major Studio To Pause Filming,” *Deadline*, January 4, 2021, available at <https://deadline.com/2021/01/los-angeles-production-shutdown-covid-19-surge-netflix-is-latest-major-pauses-filmng-true-story-family-reunioni-1234664678>.

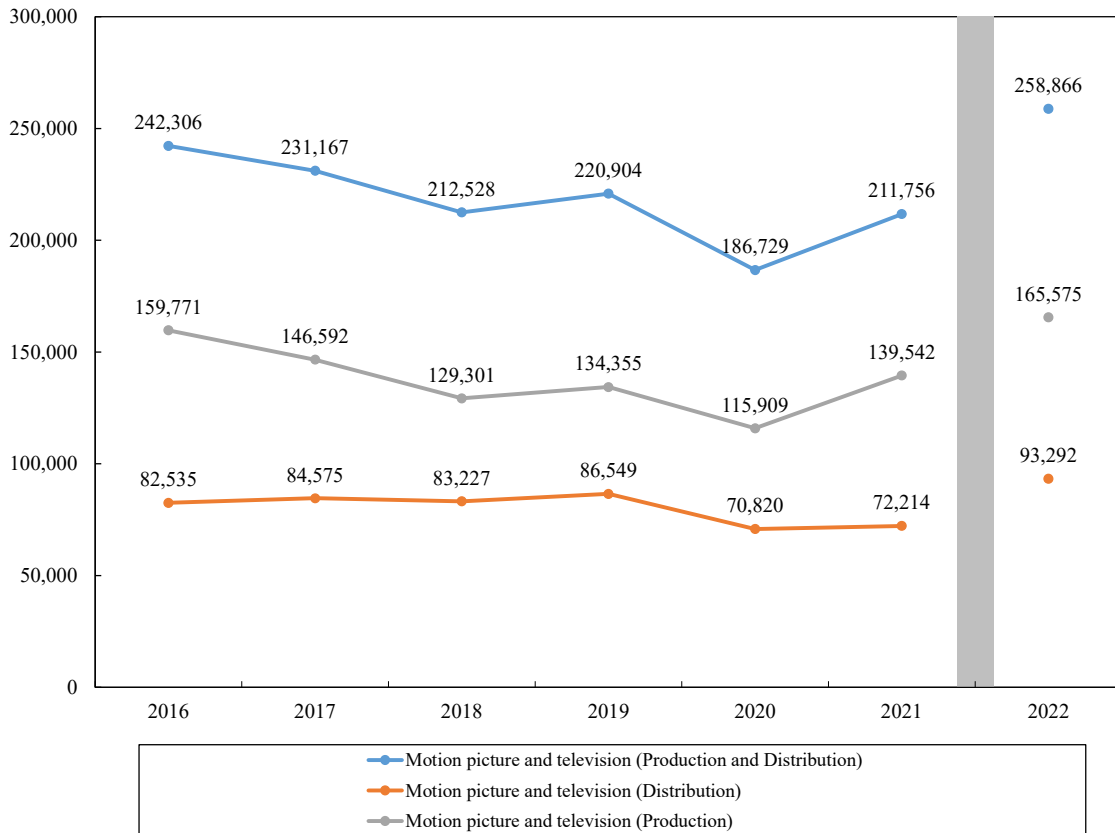
**Figure 21 – Audiovisual Direct Employment, United States**



**Source:** MPA analysis of U.S. Bureau of Labor Statistics data.

While distribution-related employment exceeds production-related employment nationwide, production-related roles employ substantially more people in California. Between 2016 and 2019, over 200,000 people were employed in the audiovisual industry in California, with over 60 percent related to production activity. Similar to the nationwide trends, the Californian audiovisual labor market saw material declines as a result of COVID-19, but has also recovered. See figure below.

**Figure 22 – Audiovisual Direct Employment, California**



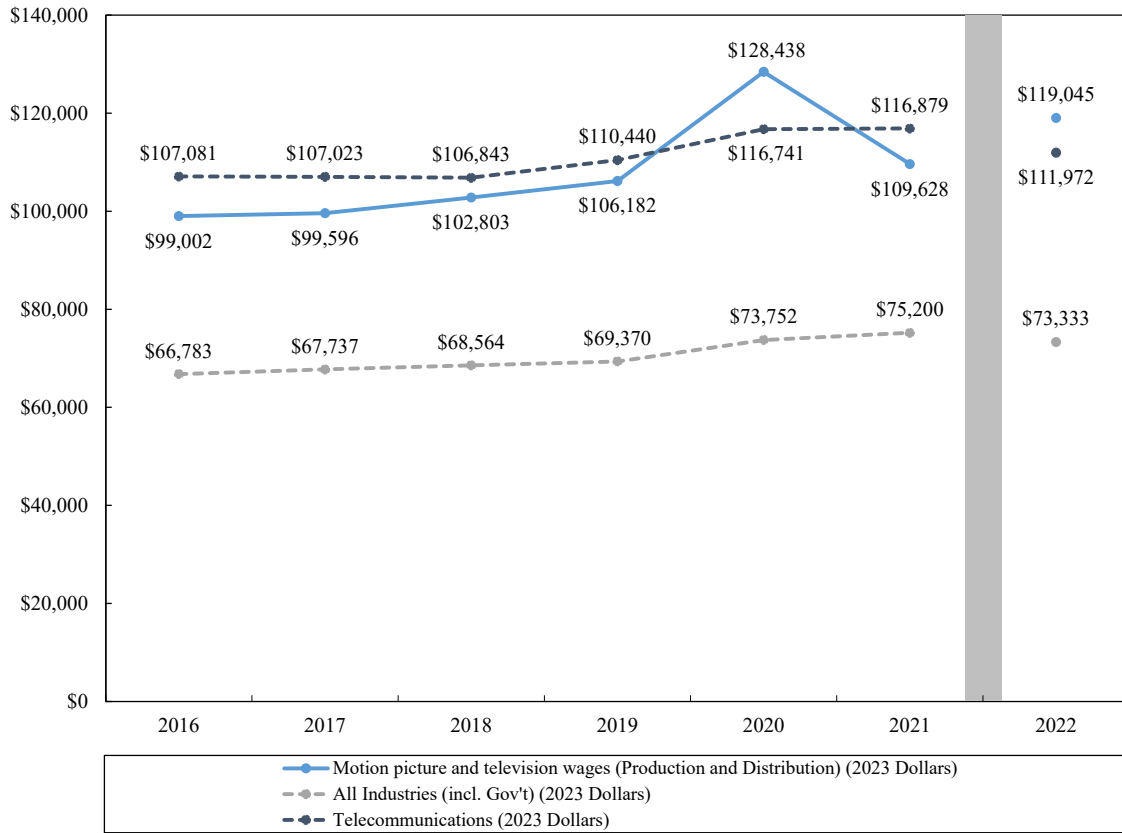
**Source:** MPA analysis of U.S. Bureau of Labor Statistics data.

**B. Wages in the Audiovisual Industry Are Above National Average Wages**

The audiovisual industry pays higher average wages than many other industries, and wages in the industry have increased over time. This appears to have coincided with the growth of OTT distribution platforms over the past decade, including the substantial increase in content spending by streaming services (see Figure 4). As shown in the figure below, average direct real wages in the U.S. audiovisual industry have exceeded average wages in the United States since at least 2016. Prior to the COVID-19 pandemic and the effects of government-mandated shutdowns on the audiovisual industry, the growth of direct real wages in the motion picture and television industry outpaced the national average across all industries. Between 2016 and 2019, national real wages in the audiovisual industry grew at an average annual rate of 2.4 percent per year, compared to 1.3 percent per year across all

industries. Moreover, U.S. real wages in the audiovisual industry are in line with wages in other highly-skilled sectors with union representation, such as telecommunications.<sup>73</sup>

**Figure 23 – Average Direct Wages By Industry, United States (2023 Dollars)**



**Notes:** Wages are adjusted to 2023 dollars using U.S. Bureau of Labor Statistics CPI All Items (excl. food & energy).

**Sources:** MPA analysis of U.S. Bureau of Labor Statistics data; U.S. Bureau of Labor Statistics (series ENUUS00050010 “All industries including government”; series ENUUS00050517 “Telecommunications”; and series CUUR0000SA0L1E “CPI All Items (excl. food & energy)”).

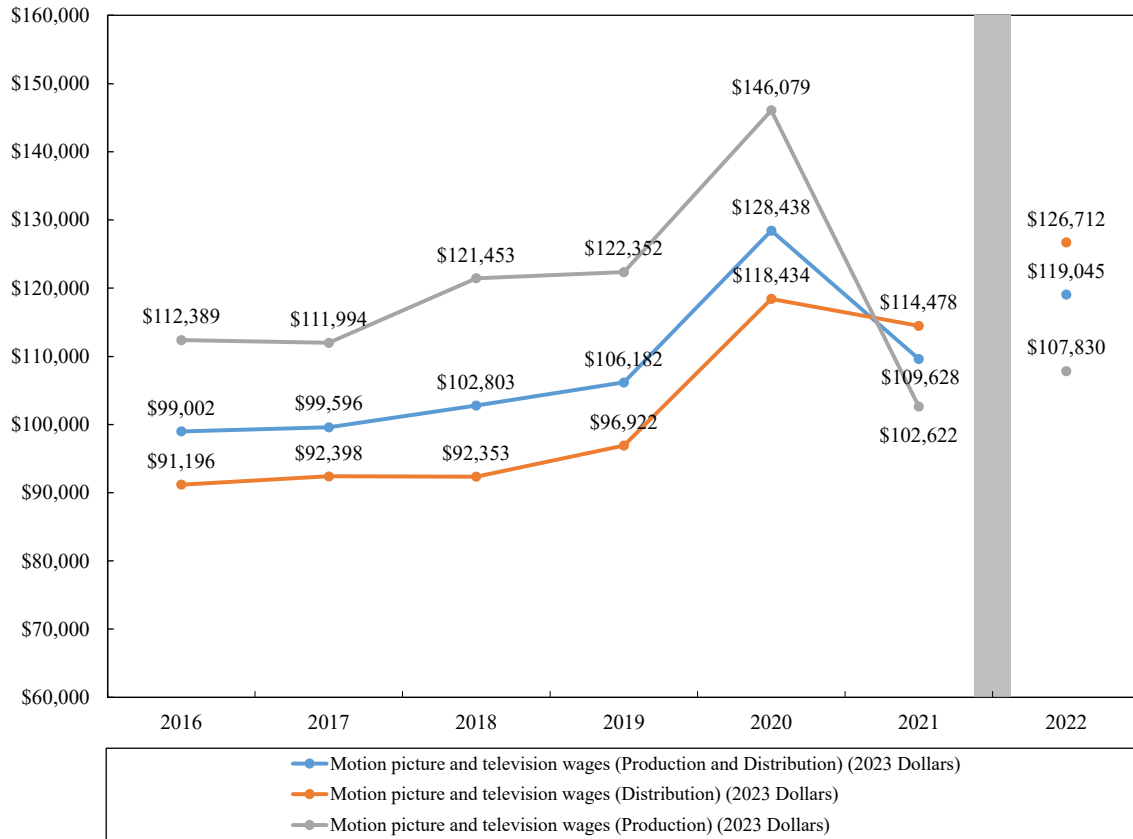
The following figure provides a breakdown of U.S. audiovisual direct real wages. Setting aside the substantial volatility in real wages in 2020 and 2021 resulting from the

<sup>73</sup> For example, approximately 42 percent of AT&T’s 149,900 employees are represented by a union. See AT&T Inc., Form 10-K for the fiscal year ended December 31, 2023, pp. 6-7, available at <https://otp.tools.investis.com/clients/us/atnt2/sec/sec-show.aspx?FilingId=17303532&Cik=0000732717&Type=PDF&hasPdf=1>.



effects of the COVID-19 pandemic, both distribution-related and production-related real direct wages in the audiovisual industry grew between 2016 and 2019.

**Figure 24 – Breakdown of Audiovisual Direct Wages, United States (2023 Dollars)**

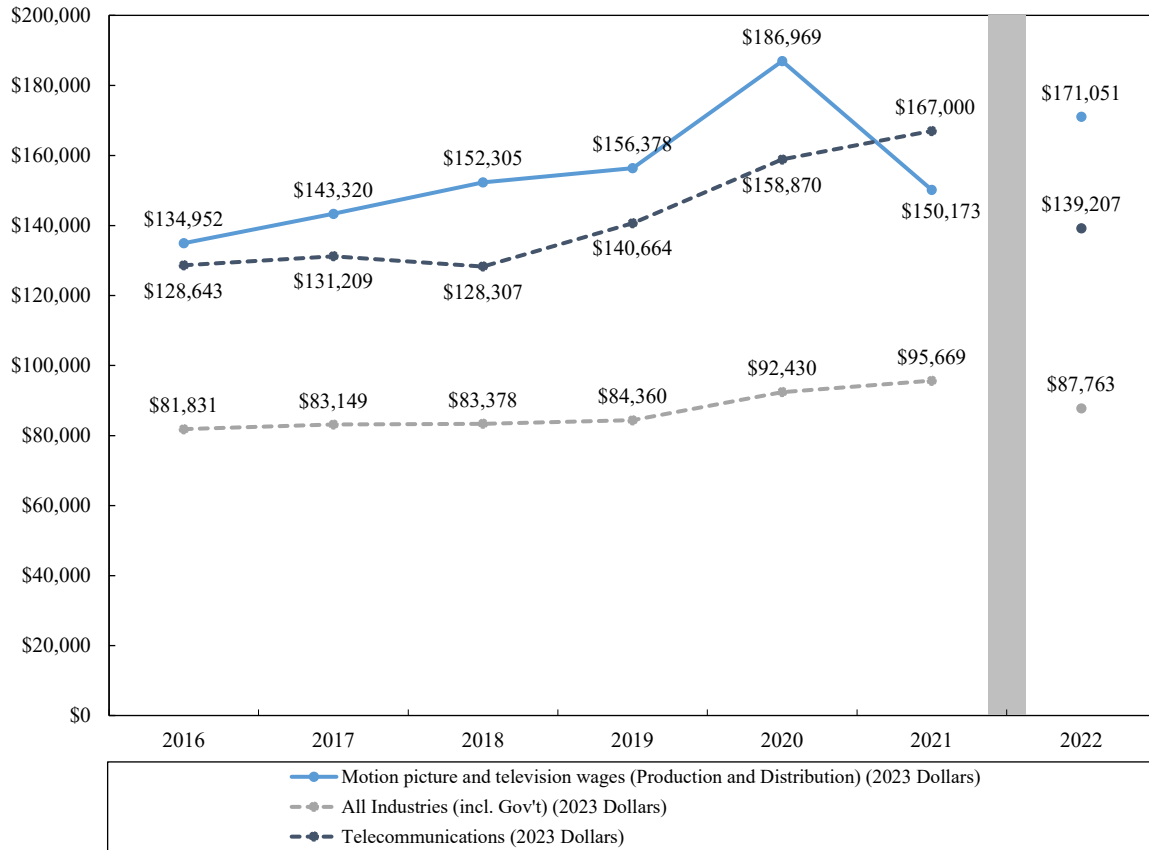


**Notes:** Wages are adjusted to 2023 dollars using U.S. Bureau of Labor Statistics CPI All Items (excl. food & energy).

**Source:** MPA analysis of U.S. Bureau of Labor Statistics data; U.S. Bureau of Labor Statistics (series CUUR0000SA0L1E).

Trends in real wages in the audiovisual industry are more pronounced in California. In 2022, audiovisual direct real wages were substantially higher than California’s average real wages across all industries. Again, setting aside the effects of the COVID-19 pandemic on real wages in 2020 and 2021, between 2016 and 2019, real wages across all industries in California grew at an average of 1.0 percent per year, while real wages in the audiovisual industry grew at an average rate of 5.0 percent per year. See figure below. Moreover, California wages in the audiovisual industry are in line with wages in other highly-skilled sectors with strong union representation, such as telecommunications.

**Figure 25 - Average Direct Wages By Industry, California (2023 Dollars)**

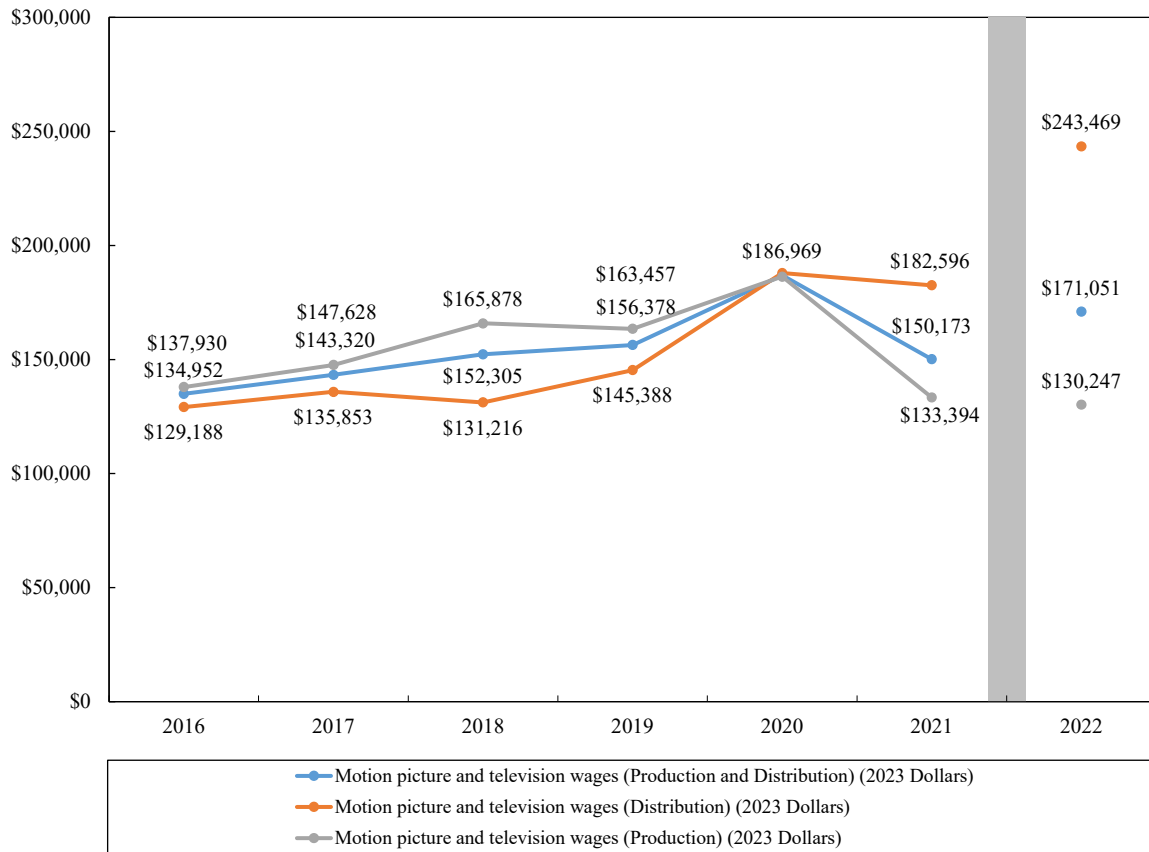


**Notes:** Wages are adjusted to 2023 dollars using California’s CPI - All Items.

**Sources:** MPA analysis of U.S. Bureau of Labor Statistics data; U.S. Bureau of Labor Statistics (series ENU0600050010 “All industries including government”; series ENU0600050517 “Telecommunications”; and State of California analysis of U.S. Bureau of Labor Statistics data, <https://www.dir.ca.gov/oprl/cpi/entireccpi.pdf>.

The following figure provides a breakdown of audiovisual direct real wages in California. Real wages for both production-related and distribution-related workers in the audiovisual industry grew between 2016 and 2019. Trends beyond 2019 are substantially influenced by the effects of the COVID-19 pandemic. The average distribution-related real wage in California in 2022 was over \$243,000, almost 2.8 times higher than the average wage across all industries in California.

**Figure 26 – Breakdown of Audiovisual Direct Wages, California (2023 Dollars)**



**Notes:** Wages are adjusted to 2023 dollars using California’s CPI - All Items.

**Sources:** MPA analysis of U.S. Bureau of Labor Statistics data; State of California analysis of U.S. Bureau of Labor Statistics data, <https://www.dir.ca.gov/oprl/cpi/entireccpi.pdf>.

## V. CONCLUSION

This report highlights signs of robust competition in the audiovisual industry that benefit consumers, and also provides insight into the competitive health of the broader industry, including the labor market. The empirical evidence supports the conclusion that the audiovisual industry is a dynamic and highly competitive industry with numerous participants providing an increasingly diverse array of content across new and innovative delivery platforms, benefitting consumers. Furthermore, the empirical evidence demonstrates that the audiovisual labor market is an important employer in California, is a well-functioning labor market, and pays wages above the average of other industries.