

The Costs and Benefits of Video Streaming

Jillian Scott

University of Miami

Abstract

The purpose of this paper is to explore the growth of the video streaming industry by analyzing the costs and benefits of over-the-top services. Specifically, the paper will portray the rapid growth of the video streaming industry and what the future of video streaming may look like. The major benefits of streaming services were identified as follows: accessibility, variety, low subscription fees, and the ability to reach niche audiences. On the other hand, the major costs found were identified as follows: subscription costs of bundling services, the cost of high-speed internet, negative social implications, the threat to multichannel video programming distributors, the impact on small content providers, and over saturation of services in the marketplace. Factors to consider in the future include MVPD consolidation, increased cord-cutting, and the reconceptualized video bundle. Other predictions include increased prices for streaming subscriptions and the growth of original content. The author concluded that the future of streaming will evolve along with changing technologies and the reactions of consumers.

Keywords: video streaming, streaming services, over-the-top services

Introduction

If someone heard the phrase “video streaming service” 10 years ago, they likely thought of Netflix. If that person heard the same phrase today, they might think of Hulu, Amazon Prime Video, HBO NOW, Disney+, or others. These are just a few of the over-the-top services that have emerged in the last decade. Over-the-top, commonly referred to as OTT, is on-demand, non-broadcast, Internet-streamed video content viewed on a digital display (Seel & Dupagne, 2010). Across these services, viewers can watch television, film, sports, and other special content.

The video streaming industry is booming. According to a report by the Motion Picture Association of America, there were 613.3 million online video service subscriptions in 2018, which was a 27% increase from 2017. This increased number of online subscriptions surpassed the number of cable customers for the first time, which was at 556 million in 2018 (Liptak, 2019). More recent data from 2019 validates the strong viewership in streaming and OTT. *Forbes* states that as of 2019, 61% of Americans owned a Smart TV and 52% used OTT services. OTT usage was 65% for viewers aged 18 to 34. On average, an OTT customer owns three devices they can watch content and subscribe to three different services (Salkowitz, 2019).

The first three pioneers of OTT are typically recognized as Netflix, Hulu, and Amazon. Although these companies are still prominent, they are struggling more than before because all of the growing competition. This competition, aside from the few services mentioned above, includes Sling TV, Watch TV, Apple TV+, CBS All Access, and many more. It is important to note that the growth of OTT would not be possible without the growth of fast, reliable internet connection. Additionally, the growth of smartphones and other devices was a key factor in streaming.

As a result of the growing video streaming industry, multichannel video programming distributors, abbreviated as MVPDs, have been greatly affected. MVPDs include cable operators, multichannel multipoint distribution services, satellite services, and satellite programming distributors that provide television channels for purchase. These once-key players in the video industry have been in steady decline. Although the decline in traditional television is no surprise, as it has been happening over the past years, the rate of the decline has been quicker than many suspected it would be. For years, it was believed that live sports would maintain the life of MVPDs and allow them to compete with streaming services. That is until, however, streaming services made live sports accessible to viewers for a lower price. For instance, ESPN's streaming service, ESPN+, launched in 2018 and offers a monthly rate of \$5, further threatening the future of MVPDs.

Therefore, it is important to evaluate the costs and benefits of the growing video streaming industry with regard to consumers, MVPDs, and all other companies competing for market space. This topic is important to investigate because society is currently undergoing a revolutionary change in which the way companies make and distribute content, as well as the way that individuals view that content. Streaming has become fully embedded into many people's lives due to the growth of devices and services, and it has come to affect most of our present society across the workforce, schools, and peoples' pastimes. Thus, regardless of the positive or negative factors associated with over-the-top services, the current growth of these services will change the future of video and the way the industry operates forever.

This paper will first cover the benefits, or advantages, associated with over-the-top services to portray the way that these services have changed the lives of consumers. Next, the paper will break down the costs, or disadvantages, for consumers and companies. After weighing the costs

and benefits, the final section will present predictions on what the future of video streaming might entail.

Benefits of Video Streaming

Accessibility

The first major benefit of over-the-top video streaming is the accessibility. Content is easily accessible from anywhere and on any connected device. This accessibility, coupled with technology advancements, has led to a viewing habit referred to as second screen usage. Second screen usage occurs when a user is simultaneously active on multiple devices, or screens, while viewing video content. Streaming has facilitated second screen usage because people can receive content on their smart televisions, smartphones, tablets, laptops, desktops, or any other device with a screen and internet connection. Additionally, many services allow users to download shows and movies to their devices so that they can watch the content offline without an internet connection. This feature is particularly advantageous during times of travel, power outages, or in locations with poor internet or service. As an insight from *Consumer Reports* highlights, individuals must have enough storage space on their devices for the media file to download. However, if they opt for standard-definition download, a two-hour movie consumes less than half a gigabyte of data (Bufete, 2018). This is a significantly low amount, especially since the data consumption is typically stopped once a user watches the movie and deletes the download.

Because content is available at any time, viewers are not limited to a schedule as they are with traditional television. Instead, they can re-watch specific episodes or movies whenever they choose to or pause a program and return to watch it later. This flexibility has popularized the hobby of binge-watching. Binge-watching is the act of watching video, typically television programs, for a long period of time in one sitting. (Birch, 2019). For many viewers, consuming

content over a long period of time is a great part of streaming. According to a study done by Harris Interactive on U.S. adults who watch Netflix, 76% of US adults reported that binge-watching is an escape from their busy lives. Additionally, 79% stated that binge watching makes shows more enjoyable.

In 2018, Nielsen conducted studies to better understand over-the-top services in relation to demographics and devices. As Nielsen (2018) states, the methods in which consumers receive their content is evolving, as more than two-thirds of U.S. homes have connected devices that are capable of streaming video. Furthermore, Americans spend almost eight billion hours every month viewing content on connected televisions such as Amazon Fire and Apple TV. With the evolving media landscape, it is valuable to analyze what the audience and their behavior looks like when consuming content. Nielsen's results in Figure 1 summarized audience composition across the different categories of a connected device, live television, set-top-box video on demand, and digital. Before examining the results, it is crucial to know the definition of each category. Connected televisions, also known as smart televisions, refer to any television that can be connected to the internet and access content beyond what is typically offered by a cable provider. Connected televisions have interactive Web 2.0 features. Set-top-box video on demand, or STB VOD, is content that is consumed by the viewer whenever they want after its original air date and time. The VOD feature comes from the hardware device on the television that allows a digital signal to be received, decoded, and displayed on a television (Techopedia, n.d.).

As seen in Nielsen's table, 3% of live television viewers were aged 18 to 24. This demographic also made up 8% of connected devices. For the 55+ demographic, live television was the most popular category at 59%, while live television was the least popular category for those aged 13-17, 18-24, and 25-34. While live television has the majority of viewers' time

spent, connected devices have substantial consumption. These devices are likely growing due to their convenience, and it appears that OTT offerings are more appealing to younger demographics.

Variety

Another benefit of over-the-top services is the variety of content. Most streaming services have a library of original programs and content from current or past shows, leaving subscribers with many options for content. This content is typically ad-free and, if not, is almost always contains shorter ads than traditional television. In 2019, the popular streaming service Hulu even took a stance to limit advertisements to 90 seconds. Prior to the limitation, Hulu's commercial breaks could run from 180 seconds to 240 seconds (Sloane, 2019). This shorter format is attractive to many consumers who see advertisements as interruptive or disengaging.

Low Subscription Fees

An additional benefit of video streaming is low subscription fees, as individual services are considerably less expensive than traditional television plans. Figure 2 portrays some of the key streaming providers and their fees (Jones, 2018). As the figure shows, monthly prices for the mentioned services range as low as \$5.99 for CBS All Access to \$40 for Sling TV, which includes add-on content. These prices are much lower than the average monthly cable bill of \$107 (Pressman, 2018). Cheaper subscription rates are advantageous for college students, young adults, or any individuals who want to cut down on costs from cable.

Niche Offerings

The last major benefit of streaming is the ability to cater to a niche audience. Although major services such as Netflix or Hulu contain a vast library of content appealing to different demographics and interests, some services have found success in catering content to smaller

audiences who share an interest. These services populate a library full of content related to a certain hobby or genre. For example, DC Entertainment and Warner Bros. Digital Networks launched DC Universe, a streaming service catered to fans of comics and superheroes. Niche services have grown significantly in popularity, allowing smaller companies to stay alive in the increasingly competitive and populated marketplace. Instead of competing with the mass-market OTT services, companies have figured out how to target and appeal to passionate, loyal individuals. Niche services also typically charge a low fee, adding appeal for subscribers. Fans of comic books can subscribe to DC Universe for just \$7.99 a month. Niche audience should not be overlooked in the competitive landscape, however. A testament to these services' popularity is Crunchyroll, an OTT service focused on streaming anime. As of February of 2017, the service had approximately 1,000,000 subscribers. By November of 2018, the service managed to double its number of subscriptions to have around 2,000,000 subscribers (Statista, 2019). Another key player in the niche market is Disney. After recently launching its highly anticipated streaming service, Disney+, the service gained more than 10 million people in a little over a day. In comparison to mass-market OTT services, HBO NOW took almost three years to gain five million subscribers (Sorrentino & Solsman, 2019). In addition to these streaming platforms, ad-based video on demand (AVOD) platforms have emerged to give consumers more niche offerings. These programs offer free video content for consumers with advertisements. One AVOD platform, Pluto TV, has channels dedicated to specific genres such as art-house and Westerns (Bylykbashi, 2019). These niche services will likely to grow, as companies perfect the art of curating high-quality content for specialized audiences.

Costs

Subscription Costs

With all of the benefits associated with OTT services, it is crucial to point out the costs that exist as well. A large disadvantage associated with streaming is the subscription costs. Although the individual subscriptions are relatively inexpensive as compared to traditional television plans, most people have more than one monthly subscription. According to a study by Vindicia, the average American subscribes to 3.4 OTT services and pays an average of \$8.53 per service, for a total payment of \$29 a month (Fitzgerald, 2019). SNL Kagan's data validates this point in Figure 3 through their research of the percentage of OTT subscribers having one or more multiple subscriptions (Video Advertising Bureau, 2018).

As shown in Figure 3, Millennials are the most likely to have more than four OTT subscriptions at 65%, followed by Gen X at 22% and Boomers at 13%. It is interesting to see the percentage increase for Millennials for each added subscription. While the percentages are lower for the other generations, a considerable amount of Gen X and Boomers still have multiple subscriptions. These percentages will likely continue rising as streaming becomes more popular and more services are launched.

The growth of niche and mass-market OTT services is a major driver of costs because consumers do not want to be limited to the content on one service. Thus, consumers have an inclination to subscribe to multiple services simultaneously. In this sense, the OTT industry is reconceptualizing the video bundle. With traditional television, the video bundle was a common choice in which consumers would pay for a bundle of channels to increase variety and content. Now, people have compiled bundles of streaming services. Some companies have further reconstructed the bundle by selling a package of streaming services. For instance, Disney offers a bundle containing its streaming service, Disney+, along with Hulu and ESPN+ for \$12.99 per month (Hein, 2020).

Cost of High-Speed Internet

An additional downside to streaming is that high-speed internet is required to guarantee higher-quality, uninterrupted streaming. If a user's internet connection is not fast enough, their video will likely buffer and freeze. Thus, since high-speed internet is more expensive than a standard internet speed, customers must consider this factor and take on the additional cost to stream content in the most enjoyable way.

Social Impact

OTT services can also be seen as having a negative effect on people and relationships by being a distraction. Research from the 2019 Consumer OTT Report found that people spend more time watching OTT content than they do driving a car or talking to friends and family (Salkowitz, 2019). This sheer amount spent watching video content could lead to diminishing social skills and less human connections. Binge-watching, although discussed earlier through a positive lens, can have negative outcomes by distracting people who spend long amounts of time streaming. For instance, a person may fall into a rut in which they are spending their time watching television programs and, as a result, lose the motivation to work and be productive.

Threat to Multichannel Video Programming Distributors

Aside from the price and negative social outcomes, video streaming has hurt MVPDs. According to research from Convergence Research Group, 34% of households in the United States will not have a traditional television subscription by the end of 2019 (Roettgers, 2019). These households are categorized as cord-cutters, referring to people who cancel their pay television subscription in order to switch over to viewing content available on the Internet. A step further in this direction are cord-nevers, meaning people who have never paid for a cable or satellite subscription and likely never will. With many MVPDs struggling to survive, some are

staying afloat by realizing the revenue potential in OTT and providing individuals with the broadband connection needed to access their streaming applications and services. Some television providers have increased prices for their bundle plans with the goal of pushing away subscribers to that they pay for the company's more expensive internet service.

This negative impact has also led to the creation of virtual MVPDs, or vMVPDs, which are services that deliver live and on-demand linear television through the internet. In other words, vMVPDs do not supply any infrastructure such as coaxial cable, fiber, or satellite technology. Examples include PlayStation Vue, fuboTV, and YouTube TV. These services have grown in popularity as companies have found a way to reach cord-cutters and cord-nevers without needing the resources to go directly to customers. The content from vMVPDs is sometimes called a "skinny bundle" due to it containing fewer channels than traditional television subscriptions and at a reduced price than what consumers pay for traditional television (Engleson, 2018).

Other MVPDs are battling streaming by joining the game. Comcast launched Xfinity Flex, a streaming dashboard made available to cord-cutters who pay Comcast for broadband but not for television. Flex comes with a 4K set-top box to stream content and a voice remote, and it is free for qualifying households. MVPDs will likely have to continue innovating to keep up with the age of streaming. Although the lifespan of MVPDs is unknown, it is certain that they are in continuous decline while the OTT industry is expanding exponentially.

Small Content Providers

The growth of OTT services is challenging for small content providers and those unable to scale. On one hand, there are fast broadband networks around the world right now making it one of the best times to launch an OTT service. However, not everyone can succeed in the

crowded marketplace. People may be willing to subscribe to multiple services at once, but the competition for their subscription is fierce. New companies entering the game must be able to go up against the established services and differentiate themselves from the rest of the industry. This increased competition may lead to consolidation among smaller content providers, in order to scale their content to larger audiences. Although some companies have found success in catering to niche audiences, companies must continue to plan out the right content, layout, and price in order to stand out to customers.

Oversaturation

Arguably the largest drawback to streaming services is the sheer amount out there. Many believe that there is an oversaturation in the market. This high volume of services makes it difficult on the individual services to distinguish themselves and draw in subscribers, as consumers might be overwhelmed on which services to choose. Hub's Research's online survey emphasizes this oversaturation. Hub found that 24% of survey respondents said they have too many video services, and 36% said they would drop a video service or two before adding a new service. These findings do not have hopeful implications on companies looking to compete in the space. However, it is valuable to reiterate that niche services are helping to combat the oversaturation by catering to different market. For example, DC Universe will not be directly competing with Netflix for customers, because DC is going after fans of comics and superheroes while Netflix is going for the mass-market of consumers. This diversification of companies improves the chances of OTT services continuing to thrive. As for the perspective of the consumer, it will be interesting to see if consumers continue to keep subscribing to more and more services, or if they become stagnant and maintain only a few services at a time. There is

also the possibility of consolidation of streaming companies that would make the choice less overwhelming on consumers.

Conclusion

In sum, the rise of video streaming and over-the-top services comes with several benefits and costs. The major benefits are the accessibility, flexibility, variety, and ability to reach niche audiences. On the other hand, the major costs are the subscription costs which add up, the required high-speed internet, negative social implications, the impact on MVPDs, and over saturation of services in the marketplace. These advantages and disadvantages can help form predictions on what the future of video streaming looks like.

There are several factors to look out for in the coming years during the evolution of the media landscape. First, as MVPDs continue to be in decline, consolidation may become more prominent. One example is the acquisition of 21st Century Fox by Disney in 2019. More companies may start consolidating in order to grow in size, power, revenue, and to prolong the survival of MVPDs against OTT services.

Additionally, the phenomenon of cord-cutters and cord-nevers is likely to increase. Research indicates that the number of pay television subscribers is falling as the number of streaming subscribers is increasing. As discussed before, streaming through vMVPDs will likely grow in popularity due to the appeal to customers and content providers. Also, as people get rid of their pay television subscriptions, the content industry will see much more of the reconceptualized video bundle. It is likely that the norm will be having multiple streaming services at once, replacing the once-popular video bundle.

The growth of OTT will likely have effects on the job force as well. With the recent growth and demand for streaming services, there will be more jobs for people who want to work

in the streaming industry. However, there will be heightened competition between the companies since consumers have many choices when it comes to streaming. Content providers must now compete for attention and money if they want to last in the industry.

Aside from increased competition, consumers may see a hike in subscription prices. Netflix has already raised its rate for its subscribers, and other services will probably follow. Customers are willing to pay more for streaming, especially since the individual services cost considerably less than traditional television packages, so companies will likely capitalize on this high demand. Additionally, streaming services are incurring more costs through producing new content, employing workers, and maintaining the quality of streams, so companies will need to increase their rates to keep up with the costs.

Another prediction is the growth of original content. More and more streaming platforms are producing original shows and movies, which allow them to differentiate themselves from their competitors. Consumers often enjoy original content since it brings variety and high-quality options.

It is clear that consumers have more choices than ever. Just as the last generation saw the rise of cable, society is in a current wave of streaming. There is ambiguity as to what will come for consumers and media companies in the future, but as a result of OTT, the world of video and streaming will never be the same as it was just a few years ago. The future of streaming will ultimately evolve along with changing technologies and the reactions of consumers.

References

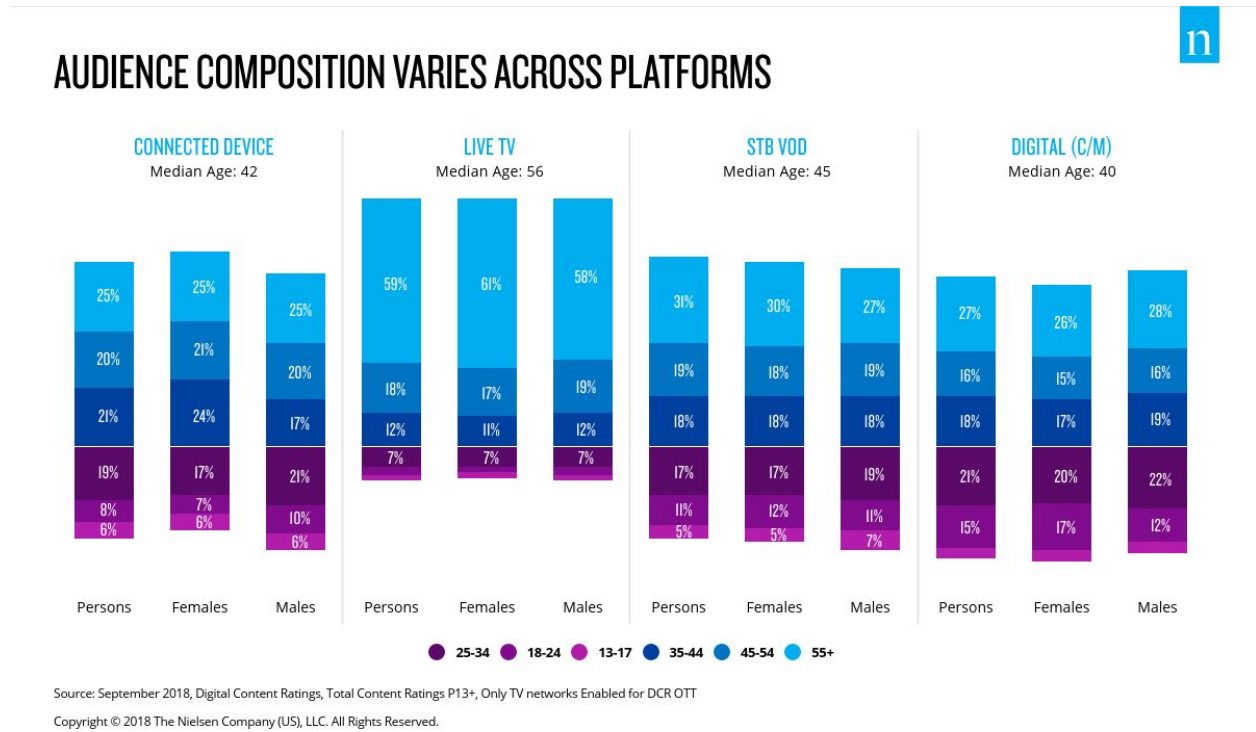
- Binder, M. (2019, March 25). Video Streaming Subscribers Now Outnumber Cable Customers: Report. Retrieved from <https://mashable.com/article/online-video-streaming-subscribers-surpass-cable-tv-customers/>
- Birch, J. (2019, June 3). How binge-watching is hazardous to your health. Retrieved from https://www.washingtonpost.com/lifestyle/wellness/how-binge-watching-is-hazardous-to-your-health/2019/05/31/03b0d70a-8220-11e9-bce7-40b4105f7ca0_story.html
- Bufete, T. (2018, November 13). Download Content for Offline Viewing Before You Travel This Holiday Season. Retrieved from <https://www.consumerreports.org/movies-tv/how-to-download-and-watch-movies-and-tv-offline/>
- Bylykbashi, K. (2019, February 13). Berlinale: Pluto TV's Focus on "Long-form, Niche Content" Will Take on Netflix. Retrieved from <https://tbivision.com/2019/02/13/berlinale-pluto-tvs-focus-on-long-form-niche-content-will-take-on-netflix/>
- Engleson, S. (2018, August 14). When Linear TV and Digital Collide: The Rise of the Virtual MVPD. Retrieved from <https://www.comscore.com/Insights/Blog/When-Linear-TV-and-Digital-Collide-The-Rise-of-the-Virtual-MVPD>
- Fitzgerald, T. (2019, March 29). How Many Streaming Video Services Does The Average Person Subscribe To? Retrieved from <https://www.vindicia.com/company/in-the-news/how-many-streaming-video-services-does-average-person-subscribe>
- Frankel, D. (2019, May 23). Quarter of OTT Users Say They Have Too Many Subscription Services. Retrieved from <https://www.multichannel.com/news/ott-market-not-saturated-hub-research-says>

- Hein, E. (2020, March 30). How to get the Disney Plus bundle with ESPN+ and the ad-free version of Hulu. Business Insider. Retrieved from <https://www.businessinsider.com/disney-plus-bundle>
- Jones, M. (2018, January 3). Guide to Streaming Video Services. Kim Komando. Retrieved from <https://www.komando.com/money-tips/guide-to-streaming-video-services/427916/>
- Liptak, A. (2019, March 21). The MPAA says streaming video has surpassed cable subscriptions worldwide. The Verge. Retrieved from <https://www.theverge.com/2019/3/21/18275670/mpaa-report-streaming-video-cable-subscription-worldwide>
- Matos, M., & Ferreira, P. (n.d.). Binge yourself out: The Effect of Binge Watching on the Subscription of Video on Demand. Retrieved from <https://pedro-ferreira.org/wp-content/uploads/2018/10/Binge-Watching.pdf>
- Nielsen. (2018, November 29). The OTT Experience: Understanding Connected Living Room Audiences. Retrieved from <https://www.nielsen.com/us/en/insights/article/2018/the-ott-experience-understanding-connected-living-room-audience/>
- Pressman, A. (2018, November 15). Why the Price of Cable TV Stopped Going Up So Fast This Year. Retrieved from <https://fortune.com/2018/11/15/average-cable-tv-bill-cord-cutting/>
- Roettgers, J. (2019, April 22). Cord Cutting Will Accelerate in 2019, Skinny Bundles Poised to Fail (Report). Retrieved from <https://variety.com/2019/digital/news/2019-cord-cutting-data-1203194387/>
- Salkowitz, R. (2019, April 10). How Much Streaming Can We Take? New Data Sheds Light on

- The OTT Revolution. Forbes. Retrieved from <https://www.forbes.com/sites/robsalkowitz/2019/04/10/how-much-streaming-can-we-take-new-data-sheds-light-on-the-ott-revolution/#39f0cfb46407>
- Seel, P. B., & Dupagne, M. (2010). Advanced television and video. In A. E. Grant & J. H. Meadows (Eds.), Communication Technology Update (12th ed., pp. 82-100). Boston: Focal Press.
- Sloane, G. (2019, March 29). Hulu puts a cap on ad loads. Retrieved from <https://adage.com/article/media/hulu-cuts-ad-breaks-half/317174>
- SNL Kagan. (2018). Percent SOV Users by Generation. Video Advertising Bureau. Retrieved from <https://www.thevab.com/wp-content/uploads/2018/03/OTT-Ecosystem-Overview-Final.pdf>
- Sorrentino, M., & Solsman, J. (2019, November 14). Disney Plus: All You Need to Know About Disney's Netflix Rival. CNET. Retrieved from <https://www.cnet.com/news/disney-plus-streaming-service-everything-to-know-all-prices/>
- Techopedia. (n.d.). Set-Top Box (STB). Retrieved from <https://www.techopedia.com/definition/2284/set-top-box-stb>
- Watson, A. (2019, August 9). Number of Crunchyroll Paying Subscribers Worldwide as of November 2018 (in Thousands). Retrieved from <https://www.statista.com/statistics/594952/crunchyroll-users/>
- Wilcox, J. (2019, November 12). Guide to Streaming Video Services. Consumer Reports. Retrieved from <https://www.consumerreports.org/streaming-media-devices/guide-to-subscription-streaming-video-services/>

Figure 1

Audience Composition Varies Across Platforms



Note. From “The OTT Experience: Understanding Connected Living Room Audiences”, by Nielsen, 2018. (<https://www.nielsen.com/us/en/insights/article/2018/the-ott-experience-understanding-connected-living-room-audience/>)

Figure 2*Guide to Streaming Video Services*

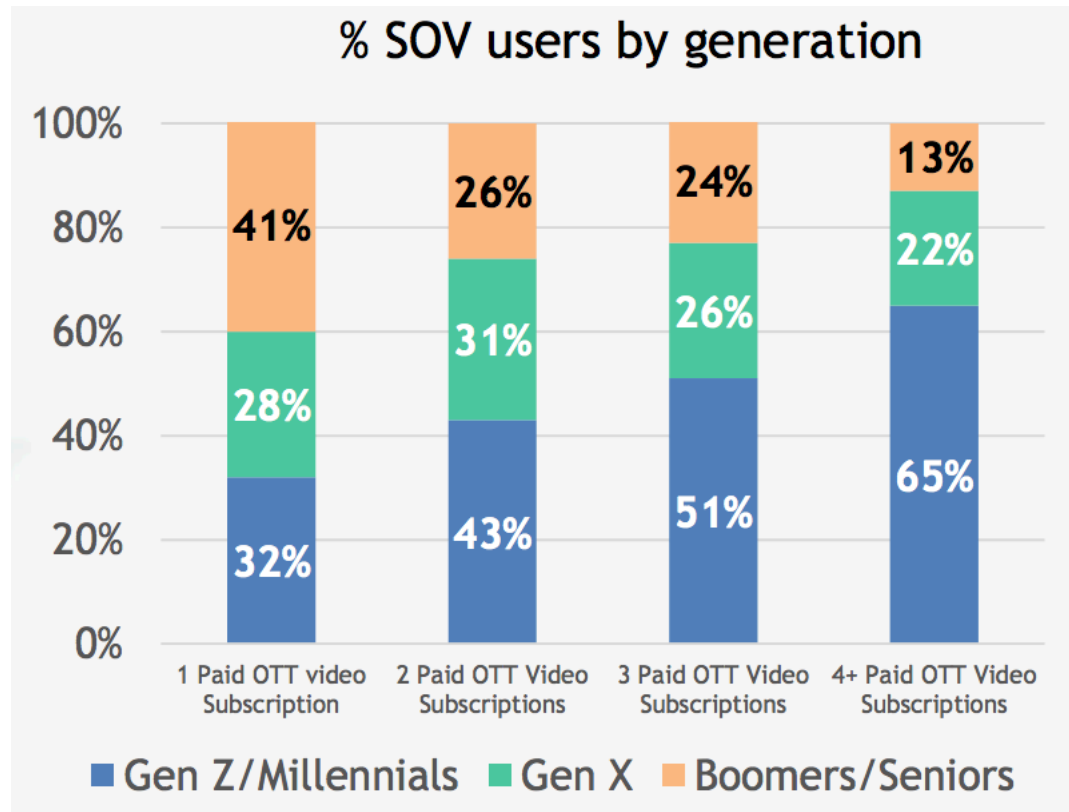
Service	Monthly	Yearly
Netflix	\$8.99	\$107.88
Hulu	\$7.99	\$95.88
Amazon Prime Video	\$8.99	\$99
Sling TV (with add-on content)	\$40	\$480
HBO Now	\$14.99	\$179.88
CBS All Access	\$5.99	\$71.88
Showtime (add-on with Hulu or Amazon)	\$8.99	\$107.88
Starz (add-on with Amazon)	\$8.99	\$107.88
TOTAL	\$104.93	\$1,250.28

Note. From “Guide to Streaming Video Services”, by Jones, M., 2018.

(<https://www.komando.com/money-tips/guide-to-streaming-video-services/427916/>)

Figure 3

Percent SOV Users by Generation



Note. From “Percent SOV Users by Generation”, by Video Advertising Bureau, 2018.

(<https://www.thevab.com/wp-content/uploads/2018/03/OTT-Ecosystem-Overview-Final.pdf>)