The Streaming Television Industry: Mature or Still Growing?

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This paper is about the streaming television industry. It begins by defining the industry and provides a brief history of the television industry in general, from the first transatlantic television signal in 1928 to 2018. From that point, it emphasizes the streaming television industry, which started in 2007, when Netflix first streamed movies over the internet. The main section of the paper focuses on Michael Porter's theory of the industry life cycle to determine the current stage of the industry. The research question is developed, proposing that the industry is in the growth phase. Then, the number of paid subscribers of the top streaming providers in 2018 is used to address the research question. The results indicate that the industry is in the growth phase. The final section provides an outlook for the industry's future.

Keywords: Streaming TV Industry, OTT TV, Growth Industry

INTRODUCTION

The television industry is rapidly changing, moving toward "over-the-top", or streaming, television. Cord cutting is occurring as millennials and traditional viewers discontinue and unbundle their television, internet, and landline telephone services (Snyman & Gilliard, 2018). Millennials are keeping their monthly expenses down by subscribing to streaming services that provide the content they are interested in watching, and binge-watching of serial television shows is the new norm (Prastien, 2019).

"Over-the-top" (OTT) television and "online video distribution" (OVD) are terms that originally referred to the streaming television services provided by Netflix, Hulu and Amazon. Television viewers could access the large video libraries of these companies via any type of high-speed internet connection, including those provided by cable TV, telephone, and satellite companies. When a customer accesses a Netflix video via an internet connection provided by Comcast—a cable TV company—no fees other than the regular internet service fees are paid to Comcast. Comcast also does not manage any of the OTT providers' videos that are streamed over its network.

In addition to the definition above, OTT television has been expanded to include any kind of video content platform, including YouTube and apps such as WhatsApp, Facebook Messenger, Skype and many others. The term now includes any kind of video communication platform (Levine, 2016).

From a consumer perspective, the streaming TV industry in the US is growing quickly (Wilson, 2018). For instance, Netflix, the biggest of the streaming TV companies, is often described as a

"stunning" technology company, consistently outperforming Wall Street predictions (Poletti, 2018). In addition, new streaming services appear on an annual basis. In fact, Park Associates estimate that there are over 200 OTT TV service providers in the US as of 2018 (Park Associates, 2018). This paper provides a brief history of the television industry and then determines which stage of the industry life cycle the streaming television industry in the US currently occupies.

A Brief History of Television

The television industry has changed dramatically since its inception. The first transatlantic television signal was broadcast in 1928 by Baird Television Development Company. By 1947, television sets were being purchased for home use and TV became a popular form of entertainment in the 1950s. It wasn't until the 1960s that viewers were first able to watch shows in color (History of Television, n.d.). In these early days, "television" was synonymous with over-the-air video broadcast, provided by entities including three national networks and a few independently licensed TV stations.

The 1970s brought the advent of cable television after easing of Federal Communications Commission (FCC) restrictions. Subscriptions to cable television in the United States jumped from 4.5 million in 1970 to over 50 million in 1990. Many cable-only channels, such as HBO, ESPN, and CNN, were launched to compete with the traditional broadcast stations.

Satellite television service started March 1, 1978, with rural customers buying direct to home (DTH) satellite dishes, which were very large. In 1980, the FCC regulations allowed for direct broadcast satellites (DBS), which led to the development of more consumer-friendly small dishes, provided by companies including Primestar, founded 1991; DirecTV, 1994; and DISH Network, 1996 (The History of Satellite Television, n.d.).

The landscape in the industry changed again with the Telecommunications Act of 1996. With the Act, Congress increased competition within the telecommunications industry, allowing traditional telephone companies to enter cable television company markets with television programming and allowing cable television companies to enter telephone company markets with telephone service. Both types of companies were also now allowed to provide internet service to customers (Economides, 1998).

When OTT services first launched in the 2000s, the viewing habits of consumers changed, options changed, and by 2013, cable TV represented only 50% of the multichannel video program distributor (MVPD) market (Gattuso, 2015). In 2005, iTunes started offering some television programs that could be purchased. YouTube also launched in 2005, and Amazon Video followed in 2006. Netflix began its migration from its original model of mail-order DVD rentals to providing streaming content in 2007. Hulu (owned by Disney and Comcast) launched in 2008, and tv.com (owned by CBS) launched in 2009. Digital media players that supported OTT media became available via the first Apple TV in 2007, and the first apps for mobile devices became available in 2008. Not to be outdone, traditional cable and satellite television providers began offering services such as Sling TV (owned by DISH Network) in 2015 and DirectTV Now in 2016. In 2017, Disney announced plans to enter the OTT market in 2019 (Vixyvideo, 2017).

In the not-too-distant past, viewers had a few options to watch a favorite television show: watch it live, program a VCR to record the show, or rent a DVD/VHS tape. In 2007, its first year of streaming movies, Netflix's customers were not very pleased with the service; customers complained about the price, and that there were only 1,000 streaming titles. Customers considered the mail DVD service to be superior to streaming (Youn, 2017). But by 2017, 59% of US homes with broadband capabilities were using streaming TV services (Miller, 2018), including Netflix. Today, Netflix is the world's largest streaming TV company, and the world's largest internet media and entertainment company, with more than 117 million paid subscribers (Poletti, 2018).

Along with the shift to from traditional television to OTT, viewership habits have shifted. In 2011, Americans aged 18-24 watched an average of 24 hours of traditional television each week. By 2016, they were watching 15 hours of traditional television each week (Ascheim & Burke, 2017). In 2015, eMarketing found that 70% of all internet users were using OTT services (Levine, 2016).

New business models are emerging with OTT. Some providers, such as Netflix, offer unlimited viewing for a monthly fee, while others charge a fee to rent or buy a movie or TV show. Viewers do not see commercials on Netflix or Amazon Prime Video during shows but may see advertisements before a show starts streaming. Hulu has a tiered service; users can opt for a higher-priced commercial-free option, which had over 21 million users in 2018 (Miller, 2018). With the advent of streaming television and new devices to watch it on, many Americans began cutting the cord in 2012 (Gattuso, 2015).

Content is becoming more important to attract subscribers and receive revenue since advertising revenue is limited or non-existent. Netflix analyzed data prior to producing its first original streaming show, House of Cards, and noted that viewers would binge-watch serial dramas, loved Kevin Spacey, the British version of the show, and the director/producer. As a result, Netflix spent \$100 million for the show without seeing a pilot (Vixyvideo, 2017).

LITERATURE REVIEW AND RESEARCH QUESTION

A recent literature review by Tefertiller (2018) revealed that most scholarly research in this area focuses on a few companies, e.g. Netflix and Hulu, and how they are transforming the televisionwatching experience. Other research topics focus on the behavior and reasons of cord cutters and media substitution technologies. An additional literature search of the Business Source Premier database yielded many articles on the quality of internet signals and download speeds. However, scholarly research on the streaming TV industry and how it has been changing is lacking in the database.

This paper explores the growth of the streaming TV industry and tries to determine the stage of the industry's development. Since it is only ten years old, it is appropriate to ask if the industry is in its growth or mature phase. The following research question will be explored in the remainder of the paper: Is the streaming television industry in the growth phase of its development?

METHOD

Data Collection

To assess the growth of the streaming TV industry, the number of paying subscribers over time was used. Subscriber growth is an important metric of the industry, as is evident from fluctuations in the stock price of Netflix due to fluctuations in the company's subscriber numbers (Rapier, 2018). In addition, according to Netflix's 2011 annual financial statements, management considers the number of paid subscriptions a key driver for revenue (Netflix, n.d.).

This paper focuses in on the top-ranked paid subscription streaming services for 2018 according to Moore and Albanesius (2018). Table 1 below presents the start date of these services. Though some of the companies listed in the table may have started as free services, data for these companies are included only from the point at which they started charging for their streaming TV services. For example, Hulu offered a free streaming TV service from 2008, but started charging in 2010 (Nuez, 2009).

Estimated and reported subscriber numbers are included in the study. For example, estimated numbers are used for Netflix. It has charged for its streaming services since 2007, but did not release streaming TV subscriber numbers separate from its mail DVD business until 2011.

TABLE 1 **TOP-RANKED STREAMING TV SERVICE FOR 2019**

Company Name	Year	Source
Netflix	January 16, 2007 & 2011	Rodriquez, 2017
Hulu	May 24, 2010	Chmielewski & James, 2010
Amazon Prime Video	February 22, 2011	Stevens, 2011
CBS All Access	October 16, 2014	Steel, 2014
Fubo TV	January 1, 2015	FuboTV, n.d.
Sling TV	January 5, 2015	Sling TV, n.d.
HBO Now	April 7, 2015	Klein, 2015
Showtime	July 12, 2015	Baumgartner, 2015
DirecTV Now	November 30, 2016	Welch, 2016
Sony PlayStation Vue	March, 2016	Katzmaier, 2016
Starz	April 5, 2016	Epstein, 2016
YouTube TV	April 5, 2017	Boorstin, 2017
Philo	November 14, 2017	Wikipedia, n.d.
ESPN+	April 12, 2018	Welch, 2019

Amazon does not report Amazon Prime subscriber numbers in its financial statements, but many estimates are available from industry analysts, albeit not split for the various services Prime subscribers use. However, Dastine (2018) obtained Amazon data that indicates streaming subscribers are about a quarter of total Prime subscribers. This information was used to estimate streaming subscriber numbers from 2011 to 2017.

Hulu does not release its own financial statements, since it is mostly owned by The Walt Disney Company and Comcast. However, the CEO of Hulu makes press releases about the company's streaming subscriber numbers (Hulu.com, n.d.).

CBS All Access and Showtime, both owned by the CBS Corporation, started streaming in 2014 and 2015, respectively, and reported subscriber numbers for the first time in July 2016 via press release (Baumgartner, 2016).

HBO Now, a streaming service from cable network HBO that does not require a cable subscription, became available April 7, 2015 (Klein, 2015), and had 5 million subscribers by February 2018 (Statistica.com, n.d.).

YouTube TV, owned by Alphabet Inc., is a newcomer to TV streaming, starting in April 2017 (Boorstin, 2017)—but it has the potential to reach YouTube's existing one billion worldwide subscribers. According to CNBC, the service already had over 300,000 subscribers as of the end of December 2017 (Sherman, 2018).

DirecTV Now, AT&T's streaming service, launched November 30, 2016, with over 100 channels (Welch, 2016). On June 29, 2018, AT&T announced that its latest addition to streaming TV services, WatchTV, was up and running with over 20 channels available via wireless devices (Perez, 2018).

Sling TV, DISH Network's answer to the streaming TV industry, started streaming on January 5, 2015, for \$25 per month (Sling TV, n.d.). The service can be streamed to multiple devices and includes over 30 live TV channels. Its service quickly grew to 2.2 million subscribers by the start of 2018.

In March 2016, Sony PlayStation introduced the Vue to compete against Sling TV at an entry-level price of \$20 (Katzmaier, 2016). Sony soon dropped the price and added ESPN, Cinemax and other channels to compete against newcomers. The number of Vue subscribers was recently estimated at only 670,000, making it one of the smallest streaming TV services (Perez, 2018).

FuboTV started January 1, 2015 as a streaming TV service for sports enthusiasts (FuboTV, n.d.). By October 2017, the service exceeded 100,000 subscribers (Bouma, 2017).

Philo is a new, low-price, streaming TV company that entered the OTT market on November 14, 2017 (Perez, 2017). It started in 2009 as Tivli, a cable TV service for Harvard University students but is now a national streaming service. In the first quarter of 2018, the company had an estimated 150,000 subscribers according to The Diffusion Group (Baumgarter, July 10, 2018).

Disney's ESPN+ streaming service launched on April 12, 2018, and in under a year it has obtained over 2,000,000 subscribers, a stunning accomplishment in a crowded OTT TV market (Welch, Feb 5, 2019).

On April 5, 2016, Starz started its standalone streaming TV application (Epstein, April 5, 2016). In 2018, the company has passed the 3,000,000 subscriber mark in the US market (Hayes, September 11, 2018).

Data Analysis

Michael Porter developed the most frequently used model of the life cycle of an industry in 1980, identifying four stages: introduction, growth, maturity and decline. Figure 1 below illustrates these stages in the context of the OTT TV industry. For the industry to be in the growth phase of the industry life cycle, its number of subscribers must rise substantially.

Introduction Growth Maturity Decline
Industry Life Cycle Stages

FIGURE 1 LIFE CYCLE STAGES OF THE STREAMING TV INDUSTRY

Source: Adapted from Porter, 1980.

Data analysis comprised a three-step process: 1) Adding the number of all subscribers of all streaming TV companies by year; 2) Plotting subscriber numbers for each year from 2007 to 2018; 3) Conducting simple regression analyses to determine the slope of the data from 2007 to 2010, and from 2011 to 2018.

Results

According to Ryan Michael Downey, a streaming TV analyst, the industry started when Netflix streamed the first movie in 2007 (Westlake, 2016). Because the company did not separate DVD and streaming numbers in their annual reports, the estimations of industry observers were used to estimate subscriber numbers for Netflix from 2007 to 2011 (Melanson, 2011; Nearly half of Netflix, 2010). For

2007, the number of streaming subscribers is estimated to be 1.46 million, 2.56 million for 2008, 5.76 million for 2009 and 8.86 million in 2010. Due to a separate subscriber price for streamers that started in the fourth quarter of 2010 (Melanson, 2011), subscriber additions skyrocketed in 2011 to 20.153 million according to Netflix's 2011 annual statement. Netflix's subscriber numbers, and those of many of its competitors, are presented in Figure 2.

In the introduction stage of the industry life cycle a firm may be alone. This firm may be a small entrepreneurial venture or an established company that has developed something new (Industry Life Cycle, n.d.). Netflix was not alone in this industry from 2007 to 2011, but subscriber numbers for its competitors are not available. Netflix was an established company; however, its DVD service by mail was dying, and to survive, it started streaming movies (Helft, 2007). Growth was initially slow. After 2011, Netflix's growth rate was stunning (Figure 2). Several competitors entered the paid OTT industry after 2011. Hulu and Amazon were in the industry from the beginning, but as free streaming services. The lack of reported subscriber numbers explains why Hulu and Amazon appear to have entered the industry for the first time in 2011. The same phenomenon explains the appearance of the previously established YouTube and Sony Playstation. The remainder of the companies were new to the streaming industry.

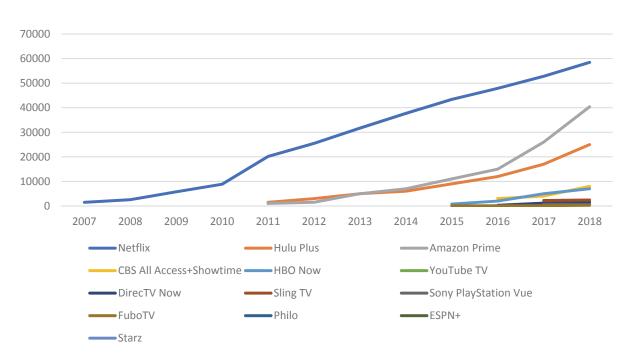
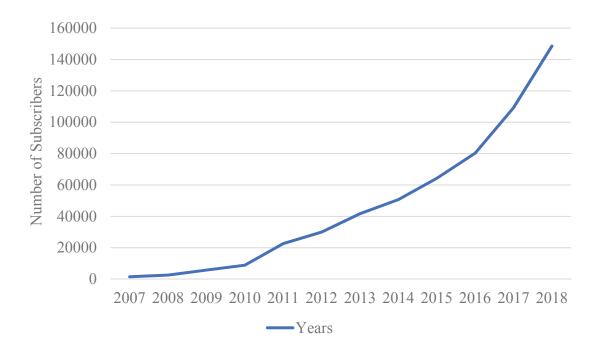


FIGURE 2
SUBSCRIBER NUMBERS IN THE STREAMING TV INDUSTRY

The subscriber numbers for all competitors from 2007 to 2018 were totaled on a yearly basis and used to create a line graph (Figure 3), which is very similar in its inflection to the introduction and growth stages of the life cycle of an industry (cf. Figure 1). The years 2007 to 2010 can be labeled as the introduction stage, since the slope of the line is flatter than that from 2011to 2017. The period from 2011 onwards can be labeled the growth stage of the streaming TV subscriber industry.

FIGURE 3
SUBSCRIBER GROWTH IN THE STREAMING TV INDUSTRY



In the last step of the analysis, linear regression was used to determine the slope for the two patterns, from 2007 to 2010 and from 2011 to 2017, in the line graph above. The results of the linear regression model from 2007 to 2010 are $R^2 = 0.96$, F(1, 2) = 51.95, p < 0.019, with a slope of 2,540. Results for the model from 2011 to 2018 are $R^2 = 0.92$, F(1, 6) = 66.25, p < 0.000, with a slope of 16,752—much steeper than the earlier slope, a change consistent with the growth pattern in Porter's model. The difference between the two periods is due to Netflix's massive growth and the entrance of new competitors to the market. The growth rate in the number of subscribers from 2011 to 2018 ranged from 22% to 39%; notably, the growth rate for both 2017 and 2018 was 36%, indicating that the industry is still in the growth phase. This answers the research question in the affirmative.

DISCUSSION

A growth industry has increased costs for research and development, market acceptance, impressive return on investment, sustained profits, declining costs, stiff competition and a reduction in prices (Growth Industry, 2010). Netflix started producing original programs in the U.S. market in 2013 (List of Original Programs distributed by Netflix, n.d.). Amazon also started producing original content in 2013 (List of Original Programs distributed by Amazon, n.d.), and Hulu started producing original content two years earlier, in 2011 (List of Original Programs distributed by Hulu, n.d.). Thus, the top three competitors easily meet the requirement of increased research and development costs.

Regarding market acceptance, Netflix is more popular than cable TV (Dunn, 2017), and Hulu is considered a viable alternative to cable TV by many cord cutters (Nations, 2018). The trend illustrated in Figure 3 further supports the strong market acceptance of the services of the streaming TV industry.

There is no doubt that Netflix has had significant return on investment and sustainable profits. A sixteen-year history chart shows Netflix's stock growth from \$1.07 in May 2002 to \$368.04 in August 29, 2018 (Netflix, n.d.).

What Does the Future Hold?

Streaming television has disrupted how content is distributed and how content is created. Internet distribution is growing, consumers are still watching television, and consumers are still spending money for at-home entertainment. Will traditional television companies that already have archives of movies and shows be able to re-invent themselves through streaming TV? Will streaming television companies force traditional companies out of business (Swinburne, 2018)?

Netflix is currently the leader in the streaming TV industry and has a first mover advantage. In 2016, the company planned to spend \$6 billion to make and license content, making it a vertically integrated company. Its subscription service is available in over 190 countries (The Economist, 2016). However, its success is attracting competition.

Netflix has survived by being able to buy cheap content streams from networks, but with cable companies purchasing content companies, Netflix may be at a disadvantage in the future. Netflix recently cancelled the cult-favorite sitcom "One Day at a Time" because the small audience did not justify the cost of the show. The show is now available on Pop TV, a cable network. Netflix spent \$100 million to air "Friends" for another year—however, Warner Media will then be able to sell the show to other streaming services or show it on its own streaming service (VanDerWerff, 2019).

Disney is planning to launch two new streaming services in 2019: a kids-oriented movie service and a TV streaming service called Disney+. It is considering an ESPN-type of service that does not include professional football and basketball and is exploring a separate streaming service for the Star Wars and Marvel films (ETtech, 2017). If Disney+ streaming uses Hulu as the core of its streaming service, then subscribers may have access to all of the content in the Disney "vault" (VanDerWerff, 2019).

Facebook announced Watch in 2017, a tab in the Facebook app that will host professionally produced videos at no charge because Facebook still relies on advertising for revenue. It is expected that current streaming services will continue to grow and offer new content (Roose, 2017).

With AT&T's acquisition of Time Warner, it has been announced that a new streaming service, named WarnerMedia, will be launched in late 2019 (Granados, 2018). It will include content from Turner, Warner Bros., and HBO (VanDerWerff, 2019). NBC has announced that it will begin offering a streaming service in 2020 to anyone who subscribes to traditional pay-TV service (Sherman & Boorstin, 2019). It has been reported that Apple will make some aspects of its streaming service free to its hardware customers (Barrett, 2018).

The field of streaming TV is becoming crowded; traditional cable TV companies are investing in content and adding their own streaming services. What does the future look like? Cord cutting by millennials appeared to indicate a lower cost future with much more content available to viewers. However, Arkin (2019) has reviewed the costs of cable and streaming services. He suggests that internet and cable bills average \$120 per month. Streaming services are beginning to raise prices, so individuals who purchase basic internet service at an average price of \$67 per month and subscribe to five streaming services (Netflix \$12.99, Amazon Video \$8.98, Hulu \$7.00, and HBO Now \$14.99) now spend \$111.00 per month. What we may see in the future is a re-bundling of services with a streaming component, such as Amazon's "Britbox" (Morgan Stanley, 2018; Casey & Reisinger, 2019). Currently, Netflix offers a one-size-fits-all streaming package. The future may bring a re-bundling that includes more custom options and pricing tiers, with and without ads (VanDerWerff, 2019).

What is happening internationally? Sky Now is available in the United Kingdom and CanalPlay is available in France. In response to streaming TV growth, the European Commission is considering new regulations, and China's government shut down a streaming service that Alibaba and Disney started. In emerging markets, broadband access is limited and expensive and payment systems are difficult. In developed countries, there was early growth, but that growth is slowing in areas where pay television is inexpensive (The Economist, 2016).

In the United States in the next five to ten years, it is predicted that multiple streaming services will be available, with lots of content, so much so that viewers will have trouble remembering which program is offered by which service. Viewers will be subscribing to multiple streaming services, which will drive monthly expenses up. So, will we see a bundling of streaming services for a single price (ETtech, 2017;

Gans, 2017; Lu, 2017; Roose, 2017; Swinburne, 2018)? Alternatively, will there be a combination of live and on-demand streaming with traditional broadcast television (Thibeault, 2016)?

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