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THE ECONOMICS OF NETFLIX: A SOLID FOUNDATION OR A HOUSE OF CARDS?

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ABSTRACT

The purpose of this research is to analyze the online television provider Netflix and to determine whether its business plan is viable and sustainable. Netflix is a pioneer and leader in the online television subscription service model, and as a result, its success or failure can have a large impact on its competitors and on the media landscape as a whole. After considering existing research into subscription service models such as the one used by Netflix in slightly different industries, as well as research on effective means of determining prices for subscription services, similar methodology was applied to Netflix. By analyzing financial data from Netflix, including its technology and development costs, subscriber numbers and revenue over time, a thorough examination of Netflix's successes and failures over the course of its existence were noted and analyzed. The data shows that Netflix's costs are scalable, meaning marginal costs are decreasing and the company can continue to expand. While the profitability of the DVD subscription service is waning, international expansion continues to drive overall growth and profit increases. While Netflix appears to be in good financial standing presently, the emergence of serious competitors will pose a threat in the future, and Netflix must continue to monitor its expenditures and returns on original programming to remain profitable.

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Chapter 1

INTRODUCTION

Netflix has been an industry leader innovator in the film and television industry from its beginnings as a mail-order DVD distributor to its current position as the most successful online streaming subscription service. In its original incarnation, Netflix successfully competed with video rental giants Blockbuster and Hollywood Video through its innovative use of distribution through the mail to its unique algorithm for using user ratings to generate video recommendations. As high-speed Internet access became more ubiquitous, Netflix transitioned to an online subscription streaming service that now threatens the traditional cable and satellite multichannel video program distributors (MVPDs) such as Comcast and DirecTV. What began as a tiny Internet startup in California has now blossomed into a full-blown cultural phenomenon. With its original programming having garnered 45 Emmy nomination and seven wins in the past two years, Netflix has positioned itself as a worthy competitor of broadcast networks and even premium cable channels.

Original programming such as *House of Cards* starring Kevin Spacey and *Orange is the New Black*, has helped to popularize the idea of "binge watching," a viewing method by which audiences watch several episodes or hours of content at once. With the entire season of a Netflix original being released at one time, viewers have the option of watching all episodes in one day. Netflix's more than 57 million global subscribers have demonstrated resounding approval of the notion of having entire series available at once, and have reacted positively to the company's library of licensed content as well (*Netflix Annual Report*). With more than $1.3 billion in

streaming revenues alone in 2014 and budding international business, Netflix seems to be solidifying its spot as a legitimate competitor in the television industry.

However, it remains to be seen whether the success of Netflix is destined to be short-lived or if it will be around for decades to come. Since the launch of its original programming, Netflix has been enjoying a steady climb in subscribers and critical accolades. Stock prices have risen from $160 a share in February of 2011 to more than $466 a share in February of 2015 (*Netflix Annual Report*). But with rising costs associated with production and distribution, and the potential for decreasing revenue, the future of the company might not be as bright as many would believe. Netlflix has undoubtedly reshaped the future of television and film distribution for the entire industry, but the long-term future of the company remains uncertain.

Research Questions and Importance

The primary research question to be answered is whether Netflix's current business plan, particularly its subscription model, is sustainable. In more specific terms, the question is whether or not the costs associated with production, distribution, and more are going to eclipse the revenue brought in through subscription fees. If that were to become the case, obviously Netflix would cease to make a profit and would eventually be forced out of business or be forced to change its business model. Given that much advertising revenue is migrating from broadcast and cable television to the Internet and social networks, the future of advertising-supported television is in doubt (Gerbag). Netflix offers a beacon of hope for the industry—a new model to support high-cost scripted programming based solely on subscription revenue. Thus it is important to investigate whether such a model is sustainable.

There are intuitive reasons to believe that such an occurrence could be on the horizon. Netflix executives have been vocal about the company's desire to expand its original programming, and while they do not disclose exact costs of production, gauging productions of a similar value would suggest the costs are very high (Luckerson). In addition to the potential increasing costs of production, audience fragmentation and the presence of competitors such as Hulu, Amazon Prime, and others could negatively impact Netflix's revenue.

Netflix is particularly interesting to study because it has been an innovator in the online television industry and many subsequent companies and services have tried to duplicate its success. Also, in its transition from a DVD-only subscription service to one of the early providers of online streaming video, Netflix has shown itself to be open to change and innovation. As such, the company seems likely to adjust its model in the future if it becomes necessary. The findings of this research could be significant not only for Netflix, but also for other companies in the online television industry or companies with a similar business model.

As online streaming television becomes more popular, the need to take a step back and examine the costs and benefits of the current model becomes more important. In 2014, an all-time high 6.5 percent of households in the United States decided to cancel their cable subscription, a phenomenon known as "cord cutting" (Hunt). While all cord-cutters do not necessarily have only an online television subscription such as Netflix or Hulu, many of them do use online streaming in lieu of their cable bundle. As the rate of cord cutting increases, so does the relevancy of alternatives such as Netflix.

Since the concept of online streaming television is relatively recent, as is the slightly older concept of non-linear television, which began with video on demand services, there is little

existing research that deals with companies such as Netflix, Hulu, and other online content providers. At a stage in Netflix's existence as a company during which it is seeing its highest stock prices yet, and copious amounts of critical acclaim, it is important to consider if, or when, this upward trend in revenue and number of subscribers must come to an end.

History of Netflix

This is certainly not the first time the future success of the Netflix has been questioned. Over the course of its relatively brief history, the Silicon Valley startup has been the subject of doubt and speculation. Founded in Los Gatos, California, in 1997, Netflix began strictly as an online DVD subscription mail service. While companies such as Blockbuster were still thriving with the brick-and-mortar and late fee business model, Netflix offered movie fans an alternative: for a flat monthly fee, customers could choose movies online and add them to a digital queue, have them sent quickly and directly through the U.S. Postal service, keep the title for an unlimited amount of time without incurring late fees, and send the title back for free to have it replaced with the next title of choice (Maney).

In 2002, when Wal-Mart entered the online DVD rental business, the first instance of widespread prediction of the company's demise surfaced (Helft). With the superstore entering the DVD market, many predicted Netflix would be unable to compete. With the ability to produce and distribute DVDs at a larger scale than Netflix, Wal-Mart was originally able to charge $18.76 for three rentals per month, slightly lower than Netflix's $22 ("Blockbuster Going…"). By May 2005, however, Wal-Mart bowed out of that competition, conceding the top

spot in the online DVD rental service to Netflix, even directing its own customers to its former rival (Bayout).

In 2007, Netflix entered the streaming video business, once again proving it was looking further ahead than many of its competitors. Originally a free addition to the DVD service, the streaming video seemed like a mere afterthought. In 2007, Hastings saw the potential for streaming video to become Netflix's "second act," but the idea was slow to catch on (Heflt). At the outset of this new endeavor, bandwidth and Internet speed were a major concern (Anderson). However, as technology improved and the public's affinity for viewing content online grew, Netflix's popularity saw tremendous growth.

When, in 2011, CEO Reed Hastings decided to split the DVD rental and streaming service into two separate entities with separate costs, critics and consumers alike again began predicting the downfall of the company (Smith). The change in the business model, which set both DVD and streaming subscriptions at $8 initially, led almost immediately to a fall in Netflix stock and predicted growth. Netflix weathered the storm, however, and in 2012 made another drastic change that has turned out more positively. During that year, Netflix again redirected its focus, this time to original programming. With a number of original specials and mini-series, including a stand-up special from comedian Bill Burr, Netflix slowly eased its way into the streaming market. *Lilyhammer*, a Norwegian dramedy, was the first original series to be distributed by Netflix and was met with mild success.

*House of Card*s, the critically acclaimed political thriller set in Washington, D.C., was the first show to add credibility and excitement to Netflix's original programming slate. The show, which was acquired in a two-year deal for a reported $100 million, was a huge risk for the online distributor that has paid off (Andreeva). Following up the success of the Kevin Spacey hit with

shows such as *Orange is the New Black, Hemlock Grove* and a new season of the cancelled Fox show *Arrested Development*, Netflix has confirmed its commitment to distributing original content. At a conference held by the National Association of Television Program Executives in 2015, Netflix Chief Content Officer Ted Sarandos said, "I think that we can probably launch successfully -- high-quality -- around 20 original scripted shows a year, which means every 2.5 to three weeks you're launching a new season or a new show (Wallace)."

In recent years, Netflix has also made efforts to increase its presence internationally. At the same conference, Sarndos emphasized that the new original programming would not necessarily be "aimed at America's taste (Wallace)." While Netflix was primarily a DVD mail service, international expansion would have been unfeasible and expensive, but streaming video is a good that can much more easily be exported. Having expanded recently to Cuba and with plans to begin service in Australia and New Zealand in early 2015, Netflix has demonstrated a legitimate dedication to expanding internationally (Guess).

Over the Top Services

Over the top, or OTT, refers to "video, television and other services provided over the Internet rather than via a service provider's own dedicated managed IPTV network ("Over the Top Services")." It is the most direct way of getting content from provider to viewer, due to the fact that content can be delivered "without the need for intervening carriage negotiations, or infrastructure investments (Narang)." Netflix, which allows viewers to stream titles instantly online at any time, is an example of an OTT service provider. Other examples include Hulu,

HBO Go, and Amazon Prime. OTT is seen as a major competitor to traditional broadcast and cable providers.

Streaming video online first began with a 1995 Yankees versus Mariners Major League Baseball game, and has come a long way since (Zambelli). In the mid-2000s, many OTT providers adopted HTTP protocols to stream media, which made it easy to "deliver media in small file chunks while utilizing the player application to monitor download speeds and request chunks of varying quality in response to changing network conditions (Zambelli)." Several years later, most OTT providers, including Netflix, adopted MPEG-DASH, a slightly improved method of streaming video. Today, although video quality is constantly improving and looks to do so even more with the slow transition to 4D video, streaming video does not reach the level of quality of broadcast and cable television. This will continue to be an important issue moving forward as OTT providers hope to compete with traditional television.

Chapter 2

PROBLEMS ON THE HORIZON

Netflix is one of the leading players in the streaming video industry, but that does not exempt it from facing challenges. As is the case with any company trying to make a profit, Netflix must worry about increasing revenues and keeping costs at a minimum. In both of those areas, however, there are several factors that could be of concern for the company, and for other OTT providers.

Increasing Costs

There are several issues that could lead to an increase in overall costs for Netflix in the future, and some that already have. Going hand-in-hand with Netflix's new focus on original programming is higher production costs. While Netflix does not disclose how much its spends on production for original series such as *House of Cards* or *Orange is the New Black*, there was a more than 300 percent increase in spending on streaming content during 2011, which was when Netflix made a strong commitment to producing original content (Netflix).

Internet productions are now subject to the same union regulations as cable television, commercials, and feature films ("New Media FAQs). In the early stages of online content, these unions had not extended to include online content. Now, however, stipulations regarding how much certain crew members, talent and others be paid for specific jobs will likely increase the cost of producing Netflix original content. In July 2015, the Screen Actors Guild-American Federation of Television and Radio Actors signed a contract that called for "improved terms and

conditions and full television rate minimums for productions made for subscription video on demand (SVOD) services such as Netflix, Hulu Plus and similar platforms (Deadline Team)."

Online television is growing closer in production cost to traditional broadcast and cable television production. The cost of producing prime time television has increased greatly over the past 50 years. In 1965, the cost of producing 30 seconds of prime time television was $19,700 ("TV Cost & CPM Trends). By 2014, that number had skyrocketed to $112,100.

Netflix does not disclose specific amounts it pays for additions to its streaming library, however its annual reports show the cost of acquisition steadily increases from year to year (*Netflix Annual Report*). An area where Netflix has recently increased spending is original programming, which includes shows such as *House of Cards* and *Orange is the New Black.* While these programs are generally well-reviewed and generate positive interest in Netflix, there are also more costly than shows that are acquired after they have aired on broadcast or cable television. Two thirteen episode seasons of *House of Cards,* for example, were acquired for $100 million, which works out to nearly $4 million per episode (Wallenstein). Although Netflix does not release costs of production for its original series, TV literary agent Peter Micelli estimated that Netflix originals *Hemlock Grove* and *Orange is the New Black* similarly cost approximately $4 million an episode to produce (Wallenstein). Although $4 million per episode is high, even by network television standards, Micelli points out that costs saved on marketing – which for a Netflix show is comparatively small – can be put toward programming. The issue remains whether these costs can be covered by an increase in subscriptions or costs per subscriptions, which will be considered in the following sections.

While there is an almost immeasurable amount of content available for purchase, the more Netflix buys, the harder it needs to look to continue filling holes in its streaming library.

That could mean, for example, the company would pay a very high price for the archive of one particular show, not knowing if the investment would pay off or not. As the number of subscribers continues to grow, and there are fewer people who do not have Netflix, attracting new members will become more difficult. Netflix will need to look into niche markets and offer tailored programming that its competitors cannot, and that could become costly.

Another area in which Netflix could see a rise in costs is technology and development. As a company built around a network of users, technology and development costs would ideally be scalable, meaning the average cost per subscriber decreases as the size of the network increases. If Netflix's technology and development costs were not scalable, that would be a troubling finding. The final area in which Netflix's costs might increase is international spending. Netflix has made strides to become more of an international company having recently expanded to Cuba and Australia, among others. Accompanying international expansion are additional license fees for the particular countries, as well as marketing and advertising to attract subscribers in new markets (Levine-Weinberg 2013).

A recent development that could help Netflix to keep costs down is the FCC decision to uphold net neutrality. The concept of net neutrality, which means an open Internet for all in which Internet service providers cannot charge content providers different prices for Internet "fast lanes" or decide to speed up or slow down specific websites or videos, is beneficial to Netflix. Netflix could have passed any additional fees charged by ISPs onto Netflix users if net neutrality had not been upheld.

Decreasing Revenue

Piracy and password sharing are two major factors that could lead to a decrease in revenue for Netflix. Two days after the premiere of the second season of *Orange is the New Black*, an estimated 55,670,000 illegal downloads occurred in the United States and abroad ("Number of Illegal…"). The fact that Netflix's original programming is available immediately online as a full season makes it particularly susceptible to this kind of piracy. Netflix has, however, capitalized on the prevalence of piracy to make a profit and optimize programming strategies by using data about pirated views to evaluate shows' performances ("Number of Illegal…"). It would be difficult to measure whether the programming advantage would offset the loss of subscribers through piracy, so that is still an area Netflix should monitor.

Netflix accounts can be used on an unlimited number of devices, but only one to four people can view content at once, depending upon the plan a consumer has (Netflix). Netflix could take this policy a step further and restrict password sharing by limiting the number of devices an account can be signed into, and this could help to generate more revenue in the future.

Another factor that could lead to a decline in revenue is for the rate of acquiring new subscribers to slow down or decrease. After a spike in 2011, the number of new subscribers per financial quarter has on average decreased (Netflix 10K Reports). While the overall subscriber number continues to increase, the rate has slowed, which could lead to a decrease in revenue over time. The potential for Netflix to hit a subscriber plateau is real, meaning Netflix will reach saturation in the market and new consumers will not be interested in signing-up for the service.

The final area that could contribute to a decrease in revenue is emerging competition. Although Netflix was one of the first websites to successfully operate a streaming video service successfully, it faces an increasingly competitive market. Netflix was a pioneer of the OTT video

market, but that market seems to be rapidly saturating. Netflix still has the greatest share of the online video market, but the distribution of market share is shifting (Fisher). As Table 1 demonstrates, Netflix has gone from accounting for 52.5% of online video traffic in 2013 to 57.5% in 2014. More revealing is the fact that many of the other positions changed, with HBO Go and several social media website making it into the top ten.

Table 1: Percentage of Online Video Traffic

Percentage of Online Video Traffic	
2013	2014
1. Netflix: 52.5%	1. Netflix: 57.5%
2. YouTube: 28.2%	2. YouTube: 16.9%
3. Hulu: 1.5%	3. Amazon: 3.0%
4. Apple: 1.0%	4. Hulu: 2.8%
5. Amazon: 0.6%	5. Twitter: 1.6%
6. Xbox: 0.5%	6. Apple: 1.2%
7. MLB: 0.4%	7. HBO Go: 0.5%
8. NBC: 0.3%	8. WWE: 0.5%
9. Vimeo: 0.2%	9. Xbox: 0.5%

HBO, a premium cable network that Netflix CEO Reed Hastings openly characterizes as his biggest competition, partnered with Apple to create a standalone streaming service, which does not require a cable subscription to the channel (Spanos). As of April 12, 2015, subscribers can pay $14.99 per month to receive unlimited access to HBO's library of movies and television shows, including the newest season of *Game of Thrones*, which also debuted on April 12 (Spanos). While HBO's subscription fee is higher than Netflix's $7.99 (or $8.99 for new

subscribers), it is still a viable and realistic threat to Netflix's success. Most HBO series, particularly from the last several years, are unavailable on Netflix, so it is likely a consumer wanting to watch shows such as *Game of Thrones* or *Girls* would choose HBO over Netflix, or perhaps choose to subscribe to both. The new HBO streaming service has the potential to cause current Netflix subscribers to switch services, and can also lead to consumers without any streaming subscription at all to choose HBO over Netflix.

Other legitimate competitors to Netflix exist as well. Amazon, the largest Internet-based retailer in the United States, offers Instant Video for its Amazon Prime members. While Instant Video is not the main attraction of Amazon Prime -- a $99 per year plan that offers exclusive deal, free two-day shipping, and other benefits to its members -- it has been garnering more attention lately, from critics and viewers alike, for its breakout original series "Transparent." The drama, which stars Jeffrey Tambor as a person undergoing gender transition later in life, was heralded by the Huffington Post as "the program that will put [Amazon's] scripted offerings on the map (Ryan)." As Table 1 shows, Amazon's power in the online video market is growing, and given the variety of other profitable divisions within the company's operations, it will have the ability to invest in expanding its online presence even if it is not immediately profitable. Other competitors such as NBC and ABC, which joined together to form Hulu and also have hinted recently at developing their own online streaming services, also represent a possible decrease in revenue for Netflix. Viacom has also announced plans to partner with Sony to license content from 22 of its channels for an OTT service, and Showtime said in March it would have a stand-alone OTT service in the "not too distant future (Littleton)."

One of the main ways that Netflix hopes to *increase* revenue that could potentially backfire is original programming. Netflix CFO David Wells estimates the launch of Season 3 of

House of Cards will bring in about 100,000 subscribers, which is still only "a small fraction of Netflix's projected 1.8 million Q1 domestic subscriber additions (Levine-Weinberg 2015)." Original programming can only cause so many people to subscribe to the service, and there is the potential it will not bring in revenue to cover the cost of production.

In another attempt to increase revenue, Netflix has raised the price of a month's subscription from $7.99 to $8.99 (Levine-Weinberg 2015). Furthermore, they have added an $11.99/month tier for Ultra HD content. The higher quality streaming is certainly attractive to consumers, however Ultra HD TVs are highly expensive, and this tier might not bring in considerable subscribers in the near future (Levine-Weinberg 2015).

Chapter 3

LITERATURE REVIEW

Few studies have been conducted to analyze the performance of Netflix and its likelihood of success in the future. The majority of existing research on Netflix is related to its early years as a primarily DVD-focused service, or it focuses on the streaming service offered by the company but lacks any quantitative basis. The following is an overview of literature not only about Netflix, but about over-the-top services more generally and the most efficient means of paying for those services for both producers and consumers.

Research focused on Netflix

Research focused on Netflix covers a wide array of topics, though there is not a significant amount of research on any specific subtopic or on the company as a whole. Bassamboo and Randhhawa used Netflix's DVD rental service as a case study for consumer behavior in a subscription model (Bassamboo and Randhhawa). They first defined the two types of consumers in a rental model, which are fast and slow customers. Fast customers will return the items, in Netflix's case the DVDs, quickly in order to get the next item soon, while slow customers will hold onto the DVD for longer amounts of time. According to the research, for most rental services, fast customers are preferred. However, Netflix has experienced difficulty satisfying the needs of fast consumers, according to the research. For new releases, for example, if all of the fast consumers want the DVD immediately, Netflix cannot satisfy the demand fully, and often would need to send a substitute DVD while the priority title is unavailable (Bassamboo and Randhhawa). Because of this problem somewhat unique to Netflix, slow customers, who are

not as quick to request new releases, are the ideal consumer for the company, according to the research. Now that Netflix focuses primarily on streaming video, this is less of an issue than it was before 2011.

Other research has focused on Netflix's infrastructure (Adhikari et al). The research was the first to look at the infrastructure, content delivery networks, and other public computing services used by Netflix. By logging into Netflix, streaming a video, and observing interactions between Netflix and the video player, the researchers were able to track the ways in which Netflix delivers video content, information that the company does not make public on its own. The study had three key findings: Netflix uses a variety of content delivery networks (CDNs) under different bandwidths, and will stick to that CDN for the duration of a visit on the website even if other CDNs offer better quality; the CDNs used vary greatly in quality and performance over time and space; and if Netflix were to allow the use of different CDNs at the beginning of each video stream, it could provide better delivery of video (Adhikari et al). Beyond these findings, a key takeaway from the research is that Netflix has built an Internet delivery service with minimal infrastructure of its own.

Optimal Pricing

Although literature analyzing the pricing schemes of over the top internet television providers does not currently exist, extensive research has been done on the optimal methods for charging consumers for subscription services. OTT, referring to video, television and other media shown over the Internet as opposed to through IPTV providers, can be provided through several pricing plans and options, but subscription is a common method and the one utilized by

Netflix. Because there is not a large body of research specifically focused on OTT, research on subscription services can be useful as a comparison for Netflix's business model.

Fruchter's research suggests that as the size of a network, meaning the number of subscribers, changes, so should the price charged to be a part of the network (Fruchter and Sigue 2013, Fruchter and Rao 2001). Fruchter's model attempts to "develop the optimal two-part tariff for a firm serving a growing network of subscribers (2001)." Fruchter presents the firms problem as

$$R(t) = N(t)\{k(t) - c^k + D(t)[p(t) - c^p]\}$$

in which R represents net revenue, N(t) is the number of subscribers at time t, D(t) is demand, k(t) is an additional membership fee charged per customer, p(t) is the unit price of usage charged by the firm, c^p is the firm's unit cost of providing the services, and c^k is the cost per subscriber. Fruchter writes that in order for a firm to maximize R, it must find the balance between k(t) and p(t), which would mean different things at different times. Although the results would clearl vary for a given firm, Fruchter extracted a number of common managerial tactics from this model that could benefit a firm with a dynamic pricing structure. A low membership fee, or a fee of zero if possible, coupled with a usage fee that is high at the start but decreases over time is the ideal strategy for pricing. The low membership fees at the start encourage sign-ups, while the decreasing usage fee is made possible by the fact that in a subscription-based model, marginal cost should decrease as the size of the network increases (Fruchter and Rao). According to Fruchter and Rao, a low membership or subscription fee increases the rate of adoption of a service, and increases the rate at which a network grows. A high adoption rate leads to an imitation, or word-of-mouth, effect which further builds the subscriber base (Fruchter and Rao 2001).

Building on the findings of Fruchter and Rao, Fruchter and Sigue (2013) weighs the positives and negatives of a variety of subscription payment plans. The article establishes the four methods that companies can charge for a subscription: an activation or installation fee, an ongoing subscription fee, a usage fee for services not included in the basic fee, and a cancellation fee. The subscription fee can either be paid monthly, as is the case with Netflix, or up front at the beginning of a specified period. Fruchter establishes a model, specific to subscription services, which measured the effectiveness of each form of charging for a subscription service as a network grows in size. The model shows "the optimal subscription fee at the introduction of the service is zero or close to zero, and only starts increasing with the number of subscribers when this number reaches a certain threshold (Fruchter and Sigue 2013)."

Fruchter and Sigue further suggest that at a certain threshold, the subscription fee will start to decrease again, with the trend in price appearing as an inverted "U" shape. While the model does not provide a mechanism for determining the exact point at which a system becomes large enough that the subscription fee will begin to decline, it strongly suggests that such a point exists. The study also shows that a cancellation fee can affect negatively affect subscriber attraction, but can also prevent subscribers from cancelling the service. Both iterations of Fruchter's model build on "The Bass Model," which was the first to describe the idea that the growth of initial purchases of a product will peak and be followed by an exponential decay (Bass 1969).

Beyond a simple subscription fee, Lyons (2013) poses the idea of usage-based pricing, not for Netflix specifically, but for broadband providers. Lyons describes usage-based pricing as "an umbrella term for any billing system that charges on the basis of consumption. Citing a recent surge in Internet content and traffic, Lyons suggests that in order to keep up with the

increased demand, broadband providers would need to reconsider the current flat-rate pricing system. The research presents two opposing points-of-view: regulators and academics have widely supported the move to usage-based pricing, while consumer and public interest groups such as Public Knowledge and Free Press have reacted negatively. While Lyons does not provide any quantitative data to support the outline he gives of both sides of the argument, the research sheds an important light on what could happen to companies such as Netflix is broadband providers decided to reconsider flat-rate pricing.

Parallels with other industries

Internet television distributed over the top is a relatively new industry. As such, literature surrounding Netflix relies heavily on comparisons to other similar industries, particularly in media. Cunningham and Silver (2013) suggested that Internet television is in its early stages and, like other developed industries, particularly broadcast and cable television, it will eventually come under oligopolistic control. The authors contested that although Hollywood movie studios have dominated the production and control of the American and international entertainment media industries, there is room for new leaders to emerge in the Internet television business.

Cunningham and Silver divided the emergence of online digital media into three waves. First, from 1997-2000, a group of pioneering firms came into existence, but did not gain sizeable audiences and quickly became obsolete. In the second phase, which lasted from 2001-2006, Hollywood studios made their own attempts at entering the online digital market but also failed to find significant viewership. In the third phase, which according to Cunningham and Silver has been the current phase since 2006, new firms such as Netflix, iTunes, Hulu, and Amazon have

emerged as market leaders. The authors argued that the firms that control the 2nd or 3rd screens, as opposed to the first screen (a television), will control media moving forward. Cunningham and Silver point toward constantly improving mobile technologies, the prevalence of mobile devices configured to use data, and high-speed Internet connections as some of the reasons why this shift is expected to occur.

Drawing on the similarities between the music streaming industry and the video streaming industry, Small (2012) suggests that online music service iTunes would benefit from switching to a subscription model similar to the one used by Netflix. In an effort to present an argument as to why iTunes should adopt a subscription similar to Netflix, Small clearly lays out the ways in which Netflix has already been successful.

Small attempts to quantify and qualify the value of Netflix using three categories: its content catalogue, its recommendation engine, and its portability. Small argues that Netflix's vast content library would make it difficult for a new competitor to enter the industry and compete. He also argues that Netflix's algorithm, which allows customer's ratings of content and their viewing habits to be factored into future programming decisions, is a factor in the company's success. Finally Small says the accessibility of Netflix on various portable devices and compatibility with different platforms is advantageous. The three mentioned characteristics are cornerstones of the company's success, and iTunes would stand to benefit from replicating these ideas in its own operations, according to Small. Small also notes that another strength of Netflix is that "the exclusivity of Netflix's service, particularly with respect to the recommendation engine, provided users with a discovery tool not found elsewhere, and therefore allowed it to differentiate itself from the existing online options for video consumers (Small 2012, 53)."

Over the top vs. over the air

Waterman (2013) describes various methods of paying for online content, which includes subscription, subscription and advertisements, advertisements only, and pay to download services. Waterman clearly denotes Netflix as the top performer in the subscription category of content providers, and further explains the benefits and efficiency of being a content aggregator like Netflix. The research presents the idea of "TV Everywhere," which refers to multi-channel programming distributors putting content online for subscribers in addition to airing it on television, as a potential major threat to online-only services such as Netflix (Waterman 2013). Waterman notes that TVE may present a real competition for websites such as Netflix that cannot rely on vertical integration.

Prince (2013) chronicles the decline in over the air broadcasting and the increase in over the top content from providers such as Netflix and Hulu. This switch, which can be considered within the larger trend of "cord cutting," or terminating cable subscriptions, is analyzed through survey data (Prince 2013). The study showed that young and less affluent people were more likely to cord cut, and that "improvements in content quality and offerings for OTA and OTT respectively did not notably alter how these alternative content provision methods compete with cable and satellite (Price 2013, 31)." Prince suggests that OTT providers such as Netflix are not currently posing a large threat to the existence of broadcast television, although he acknowledges the advent of Netflix original programming, which is still fairly recent, has the potential to change that.

In summary, research on the present state of the media industry shows Netflix is the leader among firms utilizing a subscription payment method (Waterman, Small). However, quantitative data suggests a flat subscription fee may not be the optimal strategy moving forward

(Fruchter). Fruchter suggests that a low membership fee at the start, combined with a high usage fee that decreases over time, is the ideal pricing scheme for a subscription-based service. However, Fruchter found that a company can only charge a decreasing usage-based fee if its operating costs decrease as the network gets larger. In order for Fruchter's model to be applicable to Netflix, the operating costs of the company would need to show signs of economy of scale, meaning marginal costs decrease as the overall number of subscribers increases. The following sections will determine whether Neflix's costs are scalable, which will reveal if this type of pricing would be applicable. Furthermore, the amount a firm can charge for a subscription will only increase for a limited amount of time before it begins to decrease exponentially with an increase in total subscribers (Bass). This suggests that if Netflix continues with its current model, in which it gradually increases its flat rate subscription rate over time, it will run into issues as to how it can maintain its level of profit. Looking at subscription rates and trends, that question will be addressed later in this paper. Fruchter and Sigue, Fruchter and Rao, and Lyons focused their research on two-part tariffs, while Netflix follows flat rate pricing. As Netflix does not fit that model, the research is not entirely comparable to a Netflix analysis.

Chapter 4

METHODOLOGY

To answer the question of whether or not Netflix's business model is sustainable, financial data taken directly from Netflix SEC filings will be analyzed. Using data beginning in 2002, when the company went public, trends in costs and revenues will be considered. With nearly 13 years' worth of financial data, increases in costs over time will be compared to increases in revenue over time to determine if Netflix is currently bringing in more money than it is spending, and if that trend looks as if it will continue into the future.

Specifically, on the cost side, operating costs over time as well as technology and development costs over time will be considered. Technology and development costs, which include streaming technologies and investments in infrastructure, are the main expenditures apart from content acquisitions, so the ability to keep these costs low is essential to the future success of Netflix.

Both technology & development and operating costs will be looked at in relation to the number of Netflix subscribers in order to see if the costs are scalable, meaning marginal cost decreases as the total number of subscribers increase. If the costs are not scalable, that could represent trouble in the future for Netflix.

The cost analysis will be further broken down into international versus domestic spending, as well as DVD versus streaming spending. Domestic spending includes content acquisition for both DVD and streaming libraries, as the two services are still offered in the

United States market. The cost of acquisition for both DVD and streaming content will be considered against the number of subscribers in each sector to determine a quarterly cost per subscriber for both DVD and streaming subscriptions. Netflix entered the international market in 2011 and entered the streaming business in late 2010, therefor data from those years to the present will be considered.

To examine trends in revenue, total revenue per quarter over time will be charted. As with the cost analysis, the revenue numbers will be considered against the number of subscribers to determine revenue per customer. Again, the revenues will be split and further analyzed as streaming versus DVD revenue, as well as international versus domestic revenue. This section of the analysis will also look at subscriber rates over time to determine if subscriber rates are increasing or decreasing, which would have an effect on revenue. Changes in prices over time will also be examined.

Finally, the cost and revenue sections will be considered together to get a better overall picture of the state of Netflix and any areas of concern. The cost per DVD subscriber and streaming subscriber in the U.S. will be compared to the revenue per each type of customer, and the cost per international subscriber will be considered against the revenue brought in for an individual subscriber in one financial quarter. From there, recommendations will be given when applicable, drawing largely from strategies discussed in the literature review, to mitigate some of these problems.

Chapter 5

RESULTS AND ANALYSIS

Financial data released by Netflix since 2002 provides a detailed look at trends in both spending and revenue. On the spending side, Netflix's operating costs have been consistently rising, as shown in Figure 1.

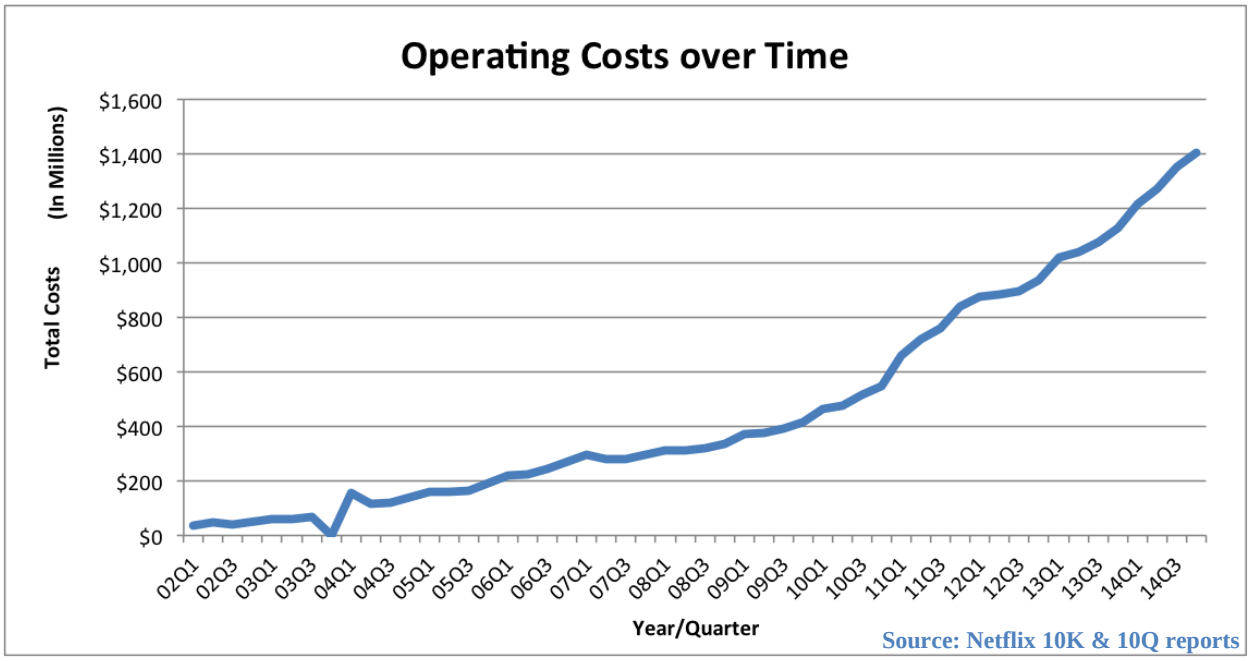


Figure 1: Operating Costs over Time

This upward trend it to be expected, however, as Netflix's number of subscribers has also increased over this time period. Considered against the number of subscribers, Netflix's overall operating costs per subscriber per quarter have largely been decreasing since 2004, as shown in Figure 2. The fact that marginal operating costs are decreasing is a sign that operating costs are scalable, meaning as more members join and the Netflix network becomes larger, average costs are decreasing. This is promising for Netflix's future and hopes for expansion, and would

suggest that Fruchter's suggestions for a dynamic pricing model could be applicable to Netflix, as it could utilize a decreasing usage fee over time.

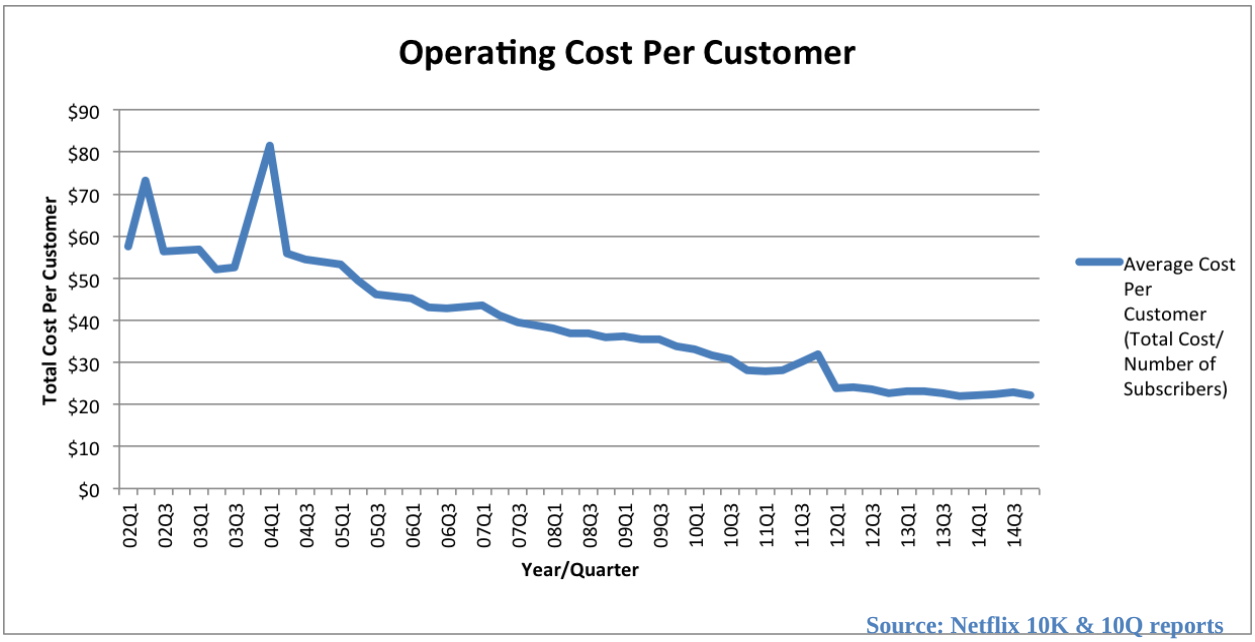


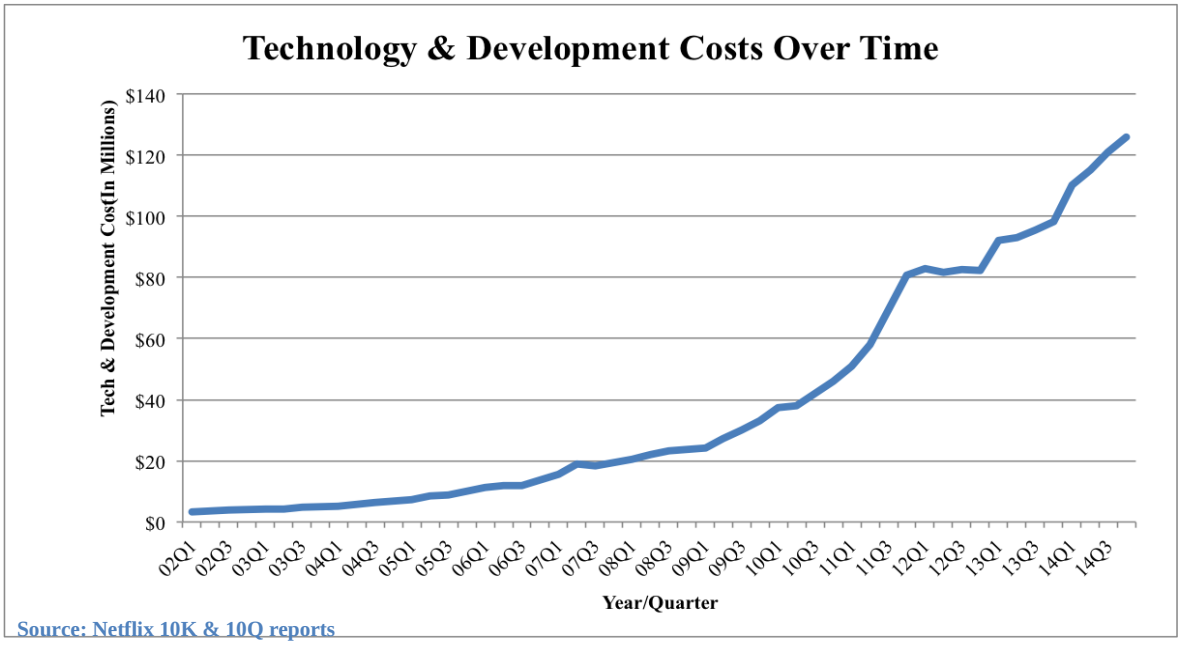
Figure 2: Operating Costs per Customer

Looking more specifically at technology and development costs, a cost that is included in overall operating costs, there are slight variations in trends over time. Technology and development costs include "testing, maintaining and modifying [Netflix's] user interface, recommendation, merchandising and streaming delivery technology, as well [it's] telecommunications systems and infrastructures and costs associated with computer hardware and software (Netflix 2014 Q3 report)." Like the operating costs, technology and development costs have been increasing over time, but the average technology and development cost per customer has been decreasing, as shown in Figures 3 and 4, respectively.

The curve taken from Figure 4 is mostly consistent with the curve for a scalable cost, except for a few peaks in cost, namely in early 2007 and early 2011. The curve does not take the same shape as the operating cost function, and the slope is not as consistent, suggesting this is an

area with varied spending. In 2011, for example, technology and development costs spiked, which was as a result of a failed and short-lived attempt to separate the DVD rental business and streaming service into two separate entities.

Now that Netflix is focusing primarily on streaming, the costs appear to be steadier. There is reason for concern, however, that if Netflix were to make another drastic change to its business model these costs could again spike. The trend in technology and development costs is not surprising, given that Netflix does not create its own infrastructure but instead outsources to other clients.



Source: Netflix 10K & 10Q reports

Figure 3: Technology and Development Costs over Time

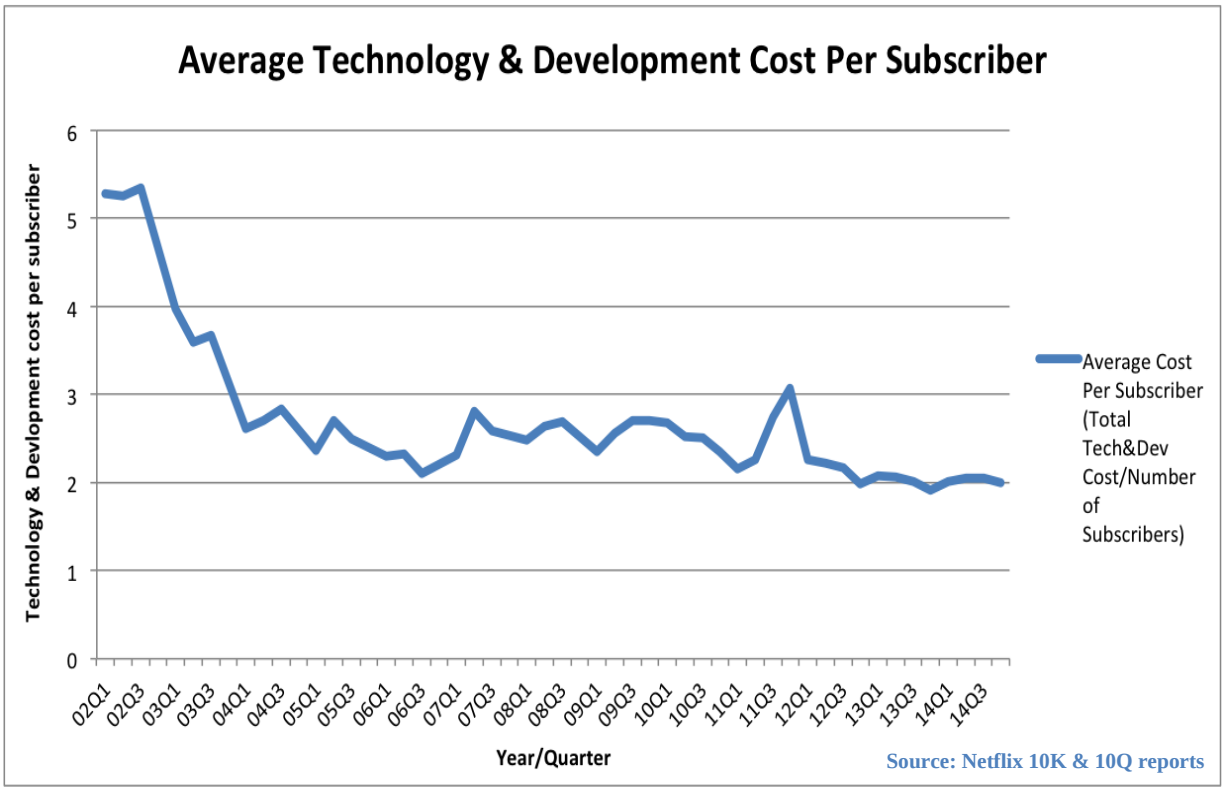
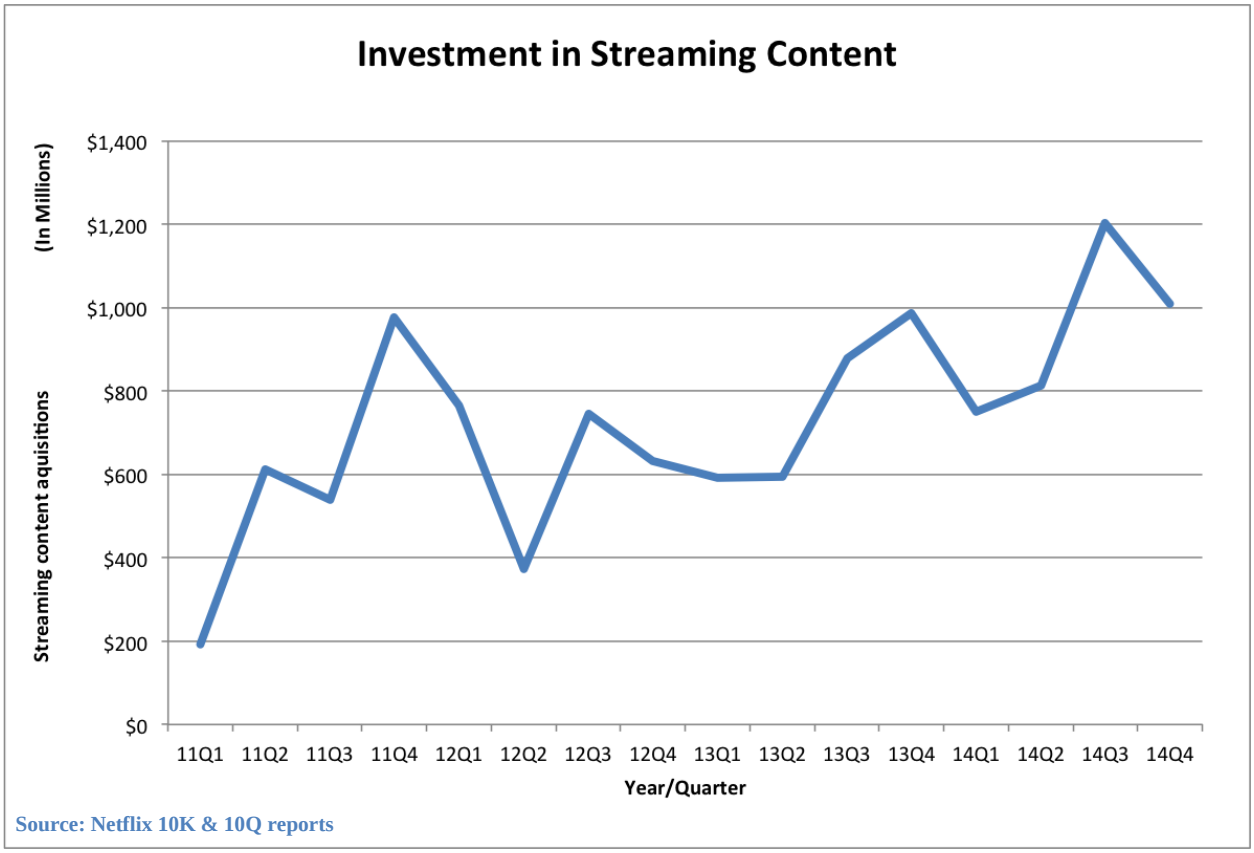


Figure 4: Average Technology and Development Cost Per Subscriber

Investment in streaming content over time has fluctuated, but the trend has been mostly positive, as shown in Figure 5. Netflix's investment in streaming crossed the $1 billion in spending per quarter in the 3rd quarter of 2014, but went down slightly in the following quarter.



Source: Netflix 10K & 10Q reports

Figure 5: Investment in Streaming Content

The investment in streaming content, which includes costs of both original and licensed programs, is for the most part increasing at the same rate as the rate of new subscribers. Figure 6 shows the relationship between the cost of acquiring streaming content and the number of subscribers over time. The cost of original content per subscriber has gone down as the number of subscribers increases, which is again a positive sign that the cost is scalable and Netflix can expand in this area.

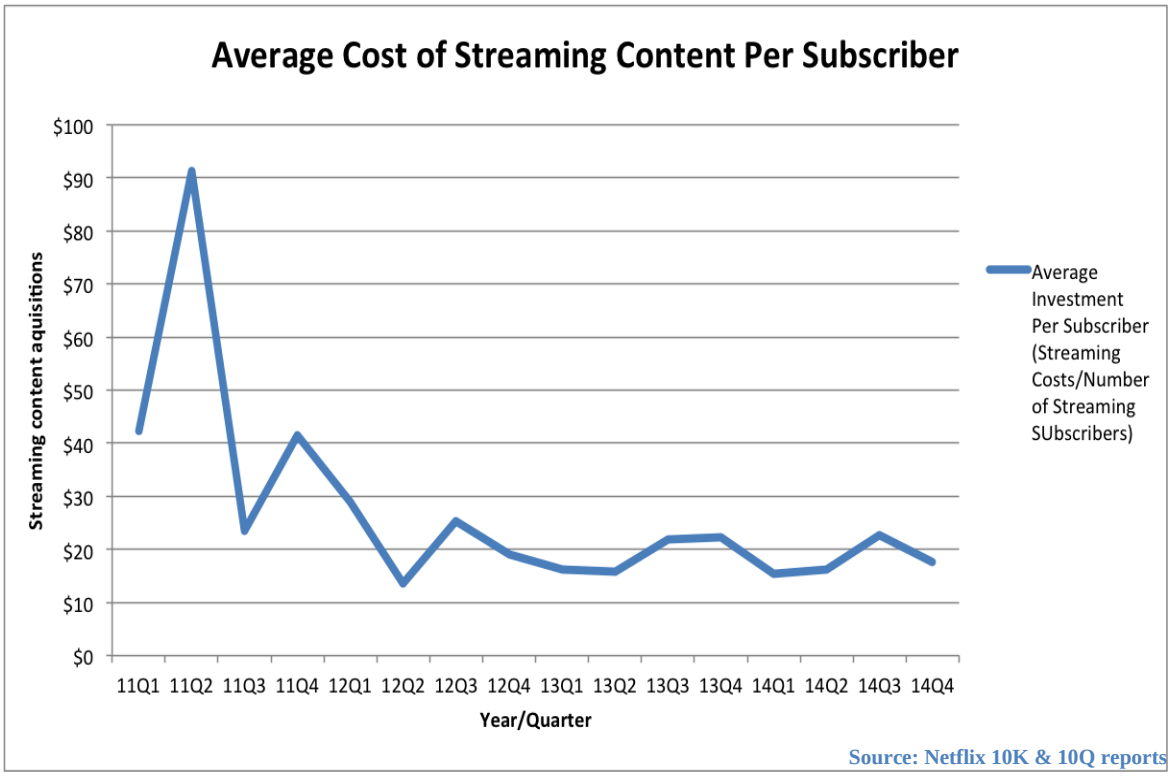
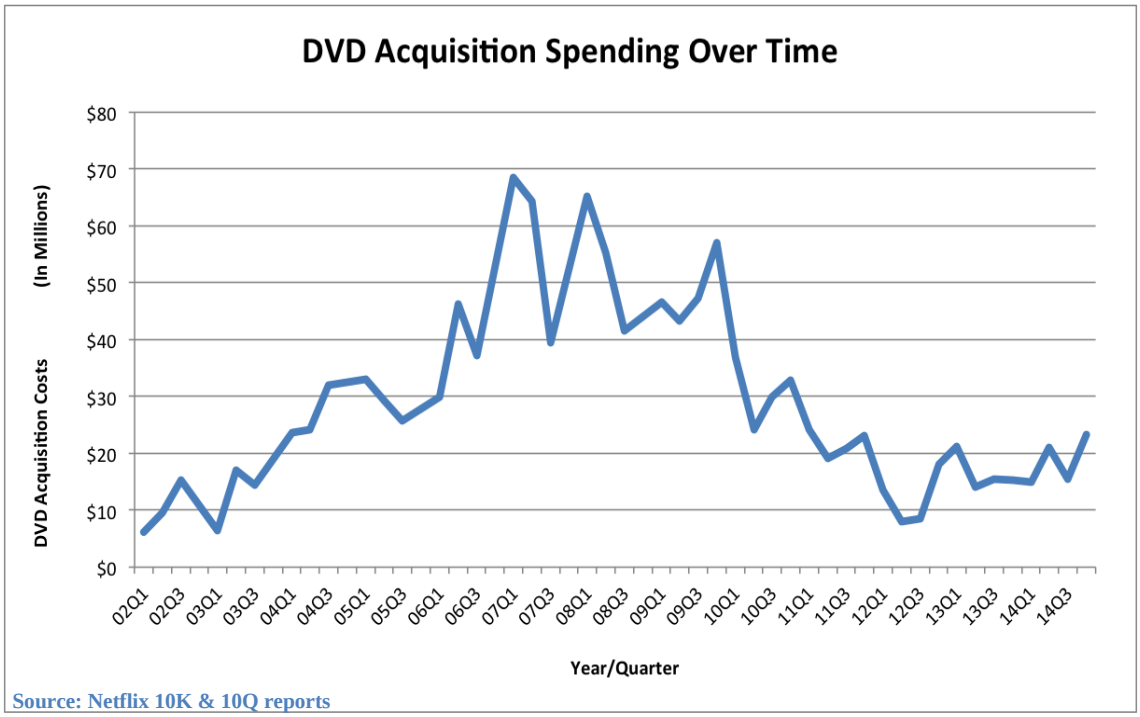


Figure 6: Average Cost of Streaming Content per Subscriber

DVD spending, on the other hand, has fluctuated greatly over time, as Figure 7 shows. The spending peaked in 2007 at $68.5 million, and began to decline significantly in early 2010 when streaming video became more of a focus. Still, in the third quarter of 2014, Netflix spent $23.3 million on DVD acquisitions.



Source: Netflix 10K & 10Q reports

Figure 7: DVD Acquisition Spending over Time

When compared against the number of DVD rental subscribers, the amount spent on DVD acquisitions becomes more concerning. As Figure 8 shows, the cost of DVD spending per customer was in decline from 2009 to late 2010 with minimal variance; however, since 2011, that number has slowly been increasing. This suggests that Netflix has not been able to cut back costs at the same rate as it has been losing DVD subscribers. If Netflix hopes to expand on other areas, DVD rentals could be a place to cut back. If Netflix were to cut back spending on DVD acquisitions at the same rate it loses subscribers, DVD sales could still be a worthwhile venture. Netflix currently has about ten times more streaming subscribers than DVD subscribers, which further suggests it should switch focus. The DVD market has little to no room for expansion, as DVD rentals are not feasible internationally.

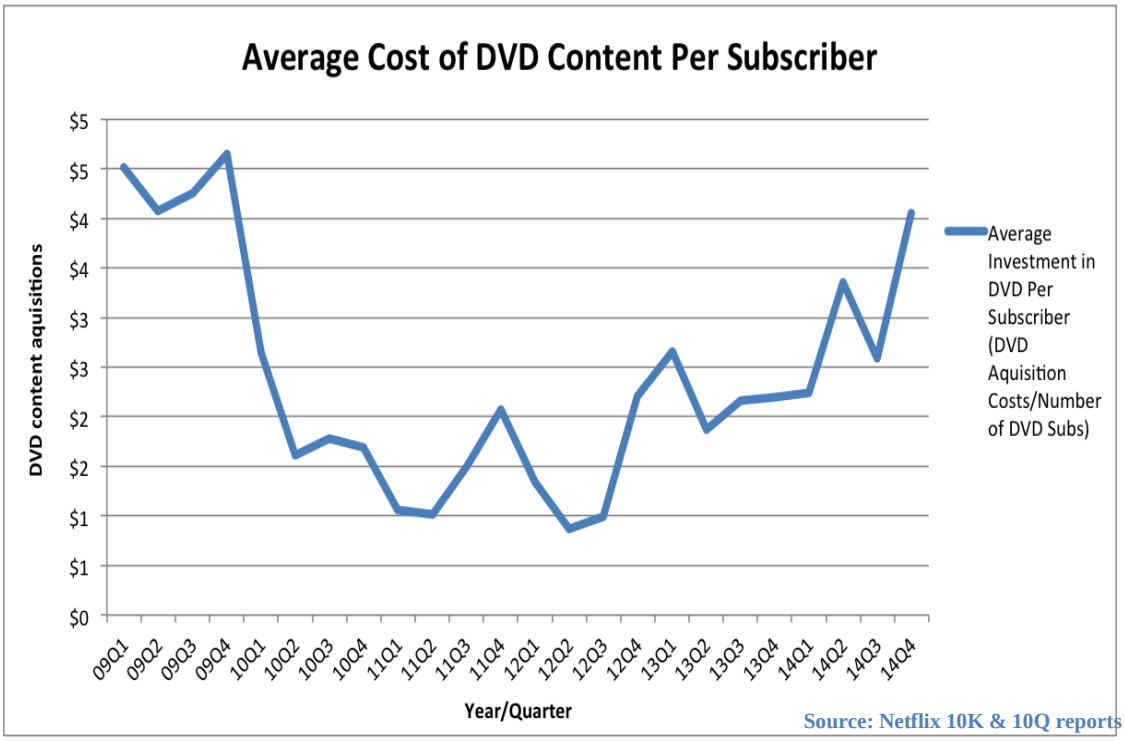


Figure 8: Average Cost of DVD Content Per Subscriber

On the revenue side, Netflix has been experiencing consistent increases in per quarter numbers, as Figure 9 shows. However, as Figure 10 shows, average revenue per subscriber has been decreasing since 2004, with a drastic drop-off occurring after 2011.

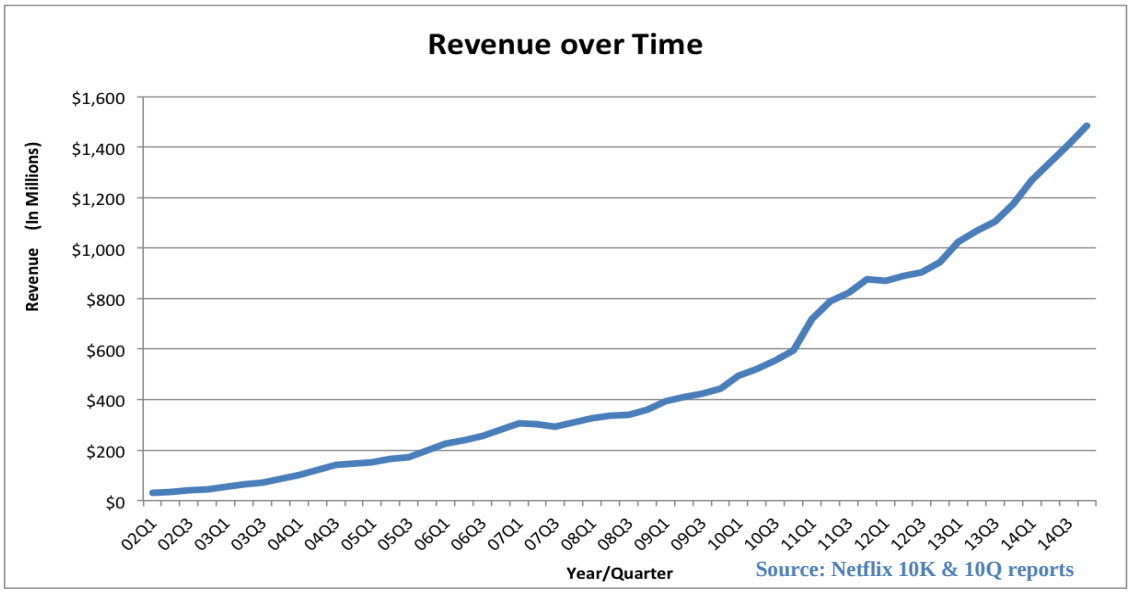


Figure 9: Total Revenue over Time

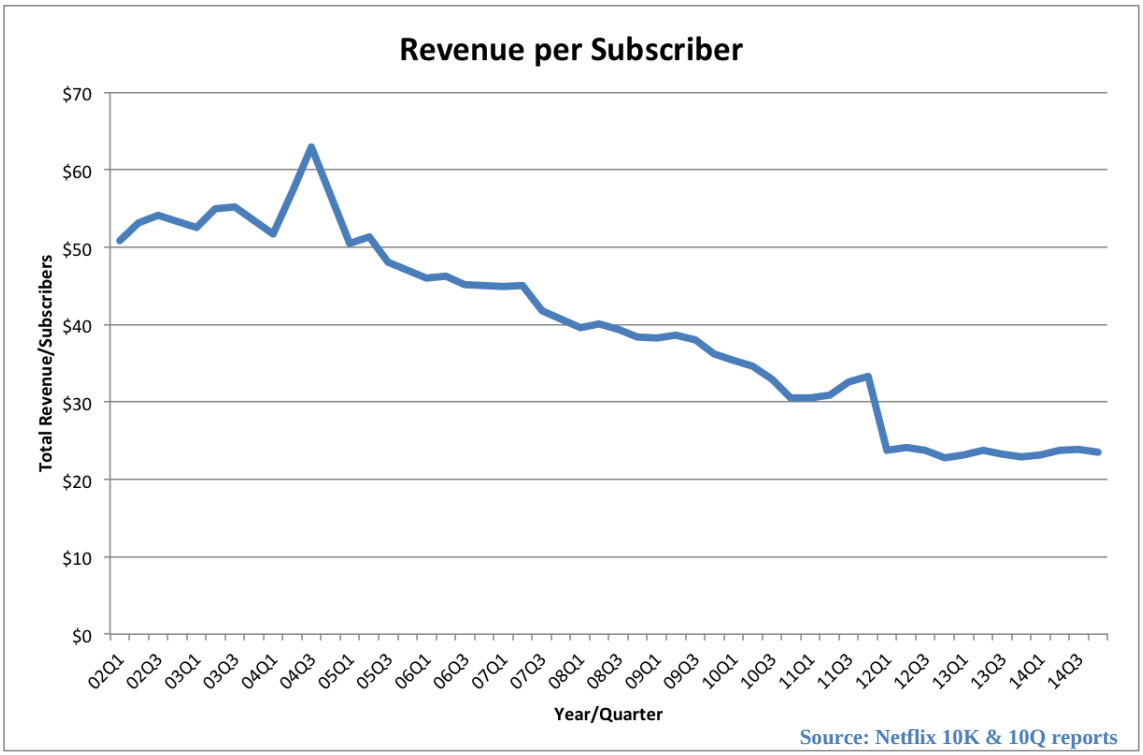


Figure 10: Revenue per Subscriber Per Quarter

The overall fluctuation could possibly be explained by the inclusion of trial subscribers in the total subscription numbers. The trial subscribers, which generally increase year-to-year but not as consistently as overall subscribers or costs, are factored into the subscriber numbers but add nothing to overall revenue, which could skew the numbers. The steep decline in 2011 can more easily be explained. In 2011, Netflix separated its DVD and streaming businesses, allowing subscribers to choose to subscribe to only the DVD service, only the streaming service, or both. The individual costs of DVD and streaming services was $7.99, and the cost of both was $15.98. Although the $15.98 price tag was much higher than the previous price of $9.99 when the services were bundled, many subscribers opted to pay for one service or the other, which explains the decline in revenue per customer.

The revenue stream can further be broken down into streaming versus DVD rental revenue, as well as domestic versus international revenues. As Figure 11 shows, revenue from streaming subscribers has been steadily increasing. Revenue from DVD sales, however, has been declining since 2011, as

Figure 12 shows. This is likely due to the split of the DVD and streaming businesses in 2011, which led to a quick decline in both the number of DVD subscribers and the price of subscription, at least initially.

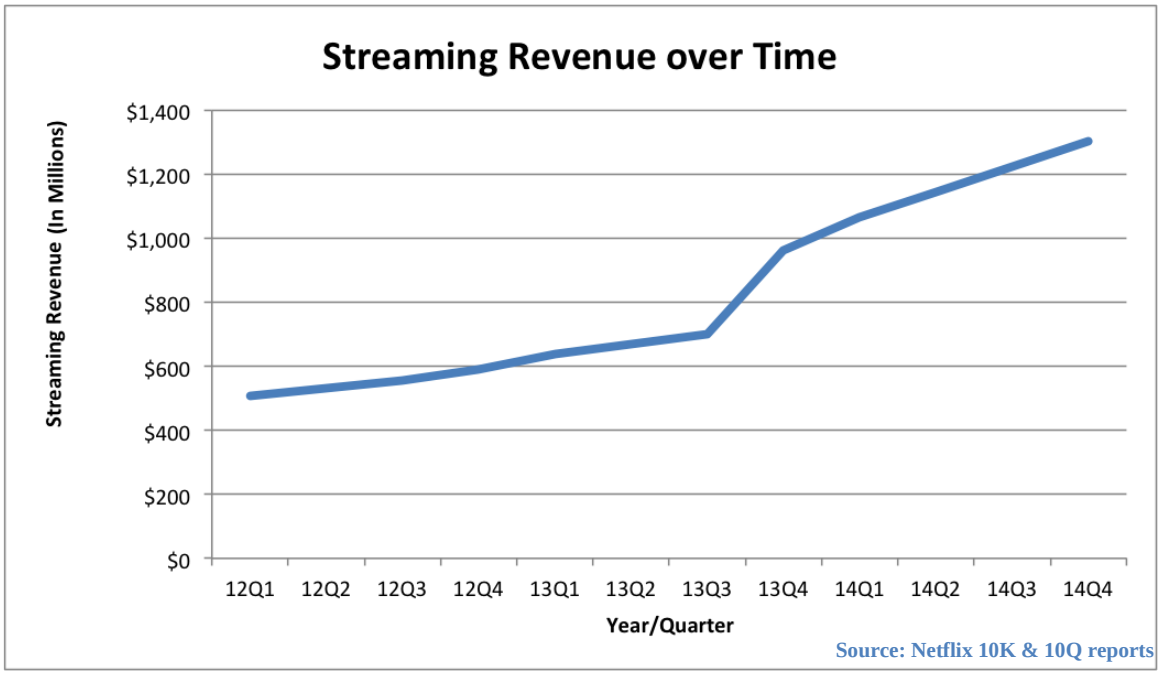


Figure 11: Streaming Revenue over Time

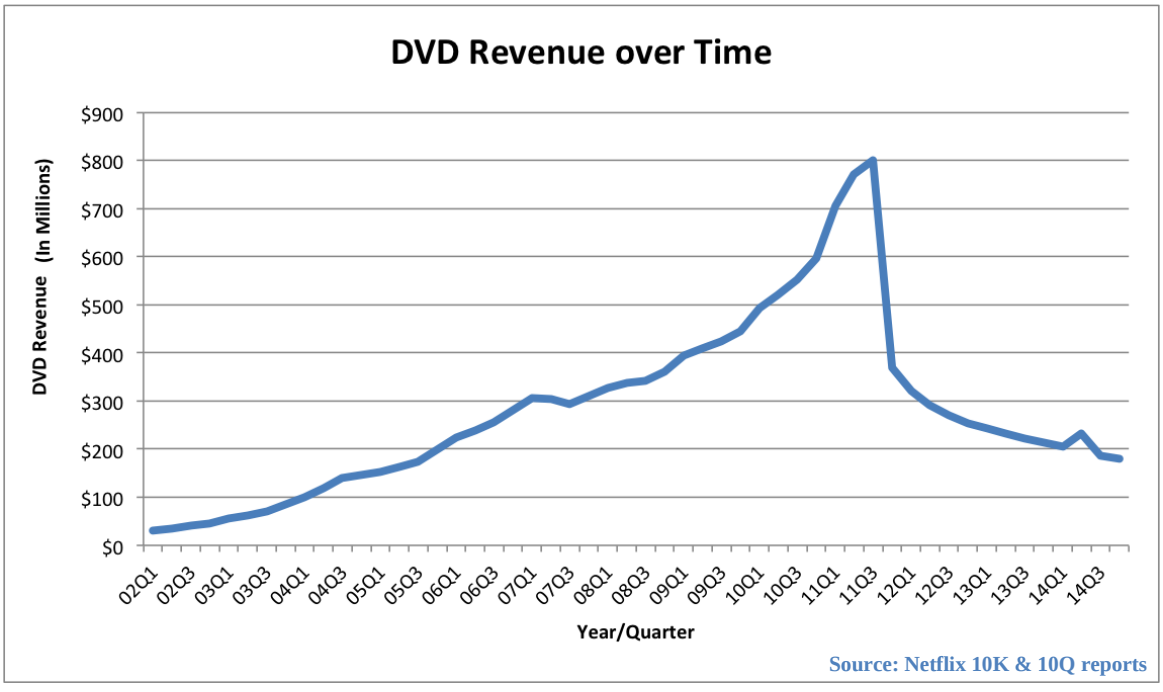


Figure 12: DVD Revenue over Time:

The average revenues per customer for DVD rentals and streaming individually reveal a different trend, however. Figure 13 shows that the average quarterly revenue per a streaming subscriber is between $15 and $25; however, the average revenue for a DVD subscriber is between $30 and $70. This discrepancy can be attributed to the differences in prices of DVD and streaming services. In 2011 when the two segments were initially split, the individual costs of a DVD subscription and a streaming subscription were both $7.99; however, since then, Netflix has begun offering a variety of prices and plans for DVD subscribers, which have factored into a higher quarterly ARPU. According to Netflix's 2014 Annual Report, DVD subscription plans range from $4.99 to $43.99, depending on the number of DVDs user have out at any one time and whether or not they pay an additional fee for Blu-ray discs.

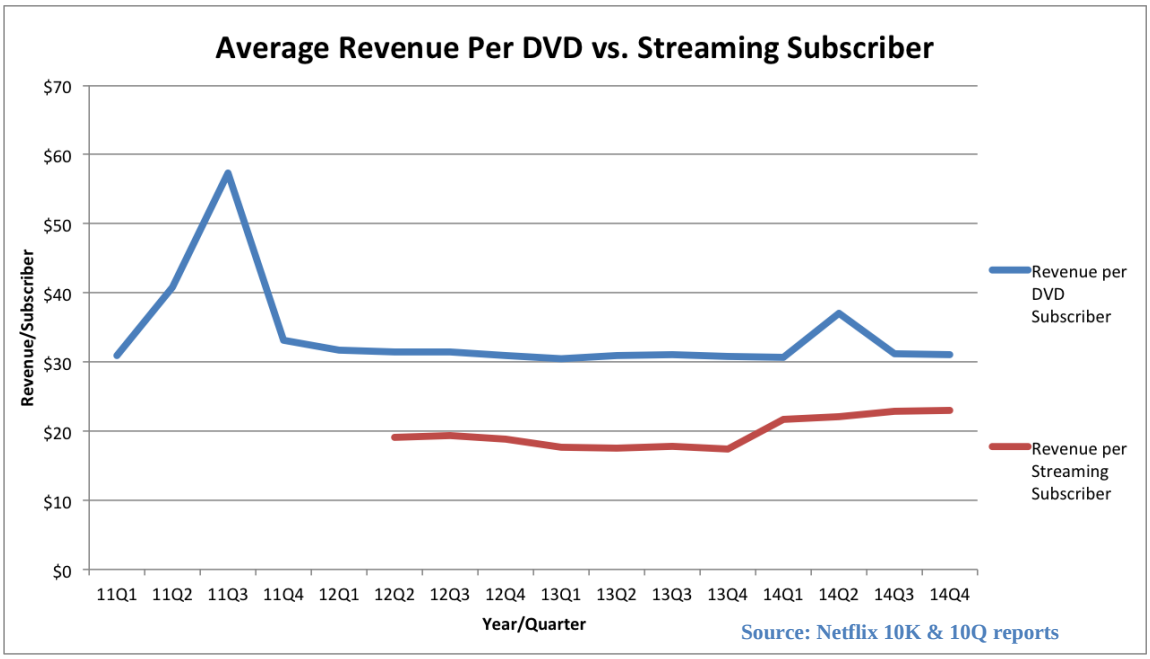


Figure 13: Average Revenue per Streaming Subscriber

Given that streaming has nearly 10 times as many subscribers as DVD rental, streaming services are still much more profitable. Although switching to a focus on streaming was the correct strategy for what consumers wanted, Netflix was more profitable per subscriber when it had the option to sell primarily DVD rental subscriptions. Netflix's decision to focus on streaming rather than DVD is

reasonable, however, as customers were slowly migrating away from DVD rental services and streaming video became more developed.

Revenue can also be analyzed when split into domestic versus international divisions. Figure 15 shows revenue for domestic business, including both domestic streaming and DVD sales, over time. It shows that revenue has been increasing at a relatively stable rate, with a slight increase in that rate around 2011, when Netflix began charging separate prices for streaming and DVD services. Figure 16 shows international revenue over time, which has also been steadily increasing.

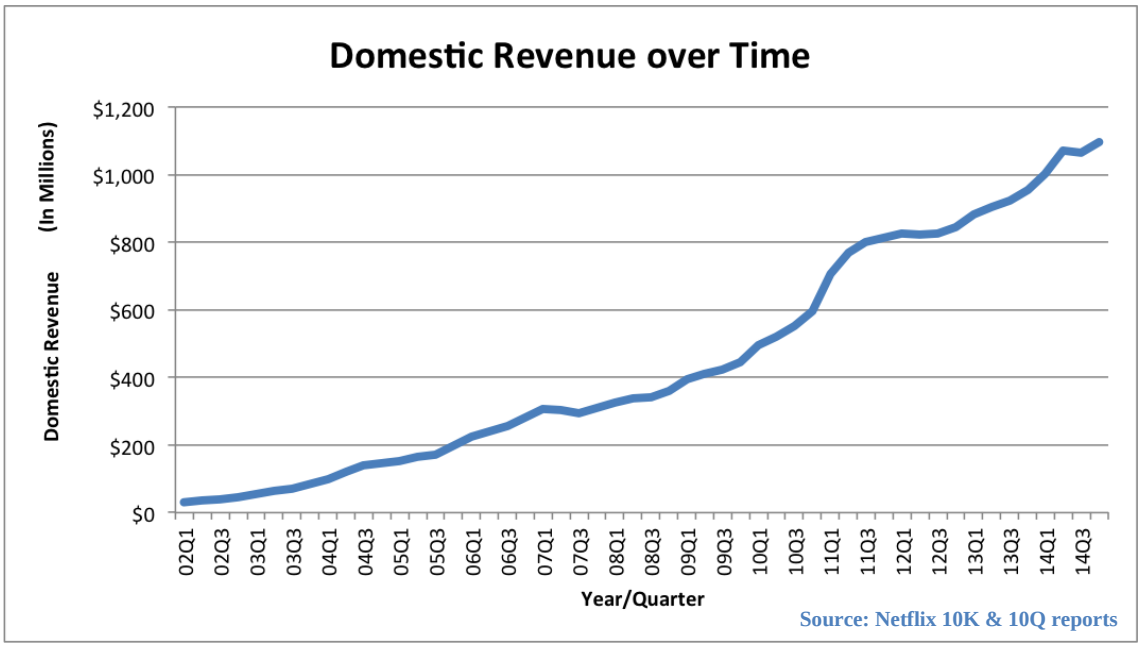


Figure 14: Domestic Revenue over Time

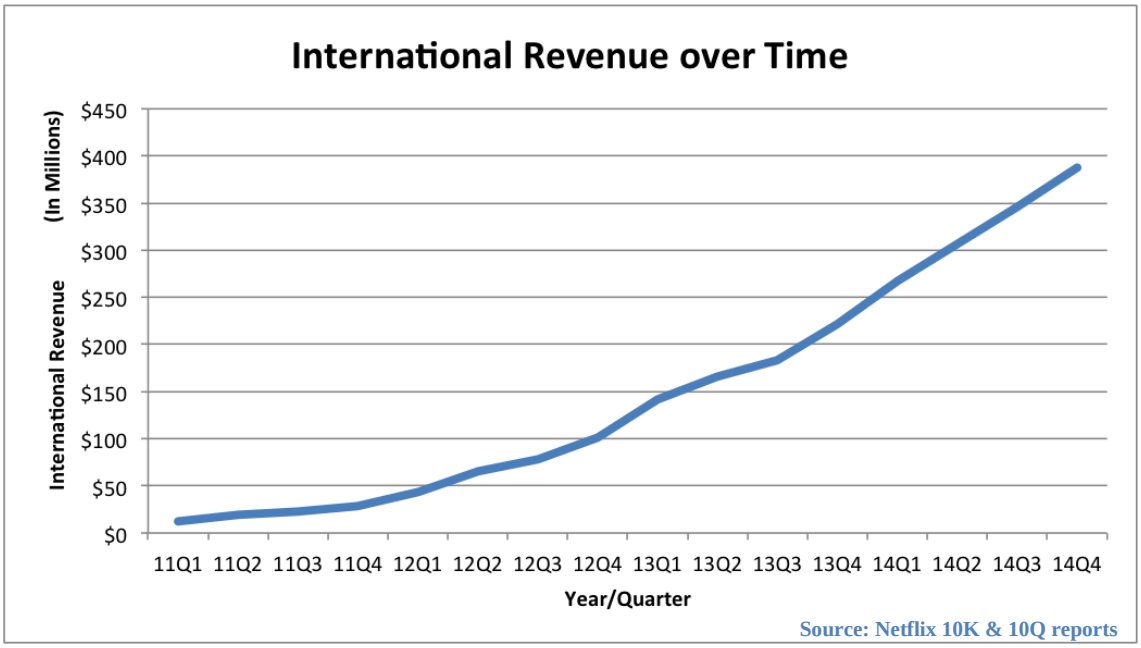


Figure 15: International Revenue over Time

When compared to the number of subscribers in each sector, average revenues for the domestic and international sectors differ. As Figure 18 shows, the average revenue per domestic subscriber per quarter is decreasing, although it is still as high as $25 in 2014. This can be attributed to the fact that costumers are moving away from the DVD rental plan, which has higher priced options than the streaming subscription plan, and are therefore paying less overall to Netflix. The overall domestic revenue per subscriber per quarter takes into account both streaming and DVD subscribers, so as more customers become streaming-only subscribers, the average revenue per user decreases.

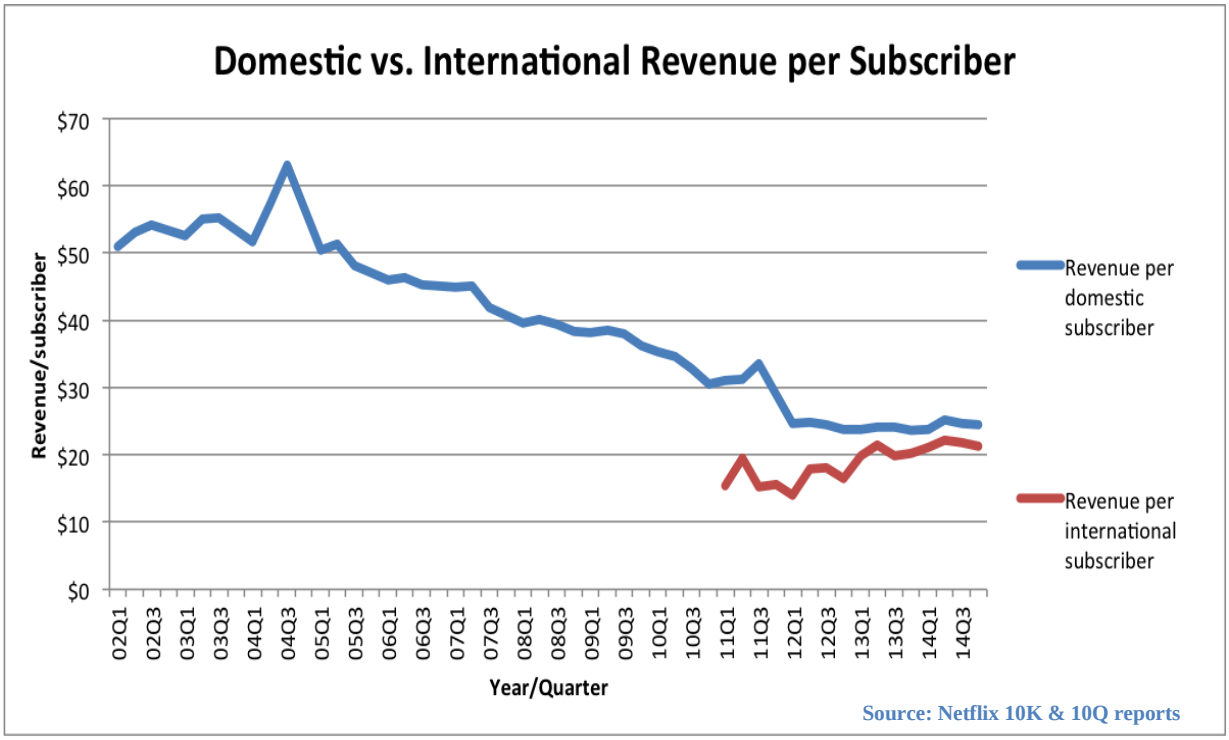


Figure 16: Average Revenue Per Domestic vs. International Subscriber

The average revenue per international subscriber has been increasing. In 2014, that number was as high as $22, which is relatively close to the average revenue per domestic consumer. This upward trend shows that international expansion could be the correct move, as there is reason to believe an international consumer can be as profitable as a domestic one. Currently, Netflix is using profits from domestic sales to finance its international expansion, but soon that might not be necessary. Finally, Figure 17 shows operating cost per customer against revenue per customer. The difference between the two curves is profit or loss per customer.

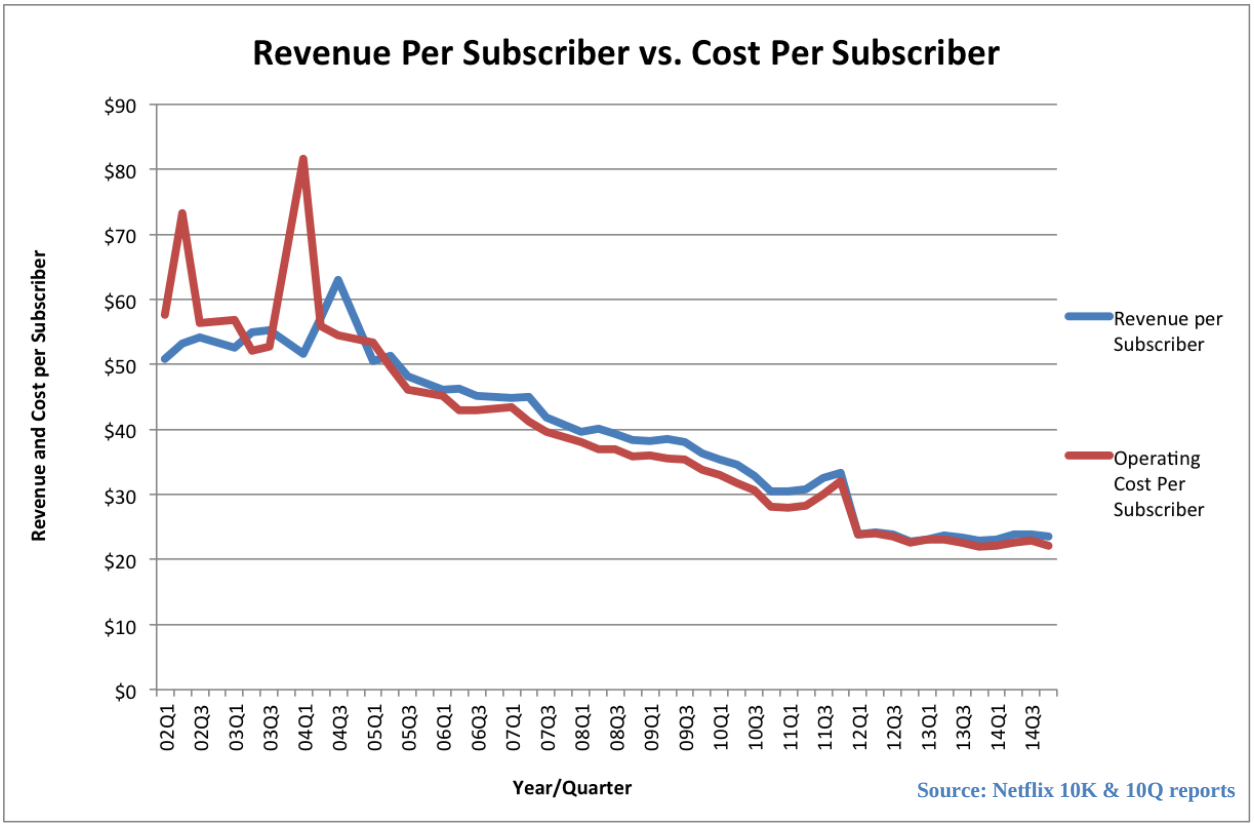


Figure 17: Revenue Per Subscriber vs. Cost Per Subscriber

Although revenue per customer has been higher than cost per customer for virtually all of the past eleven years, the gap between the two curves appears to be getting smaller, particularly following the steep drop in both revenue and cost per subscriber in 2011 when Netflix split its operations into two businesses. Although Netflix has accepted smaller margins per subscriber, it has still managed to get healthy operating margins on the aggregate, as they were able to increase subscribership. The continuing growth of the domestic subscriber base, coupled with the fast-growing international subscriber base has allowed Netflix to continue to generate considerable operating revenue.

Chapter 6
RECOMMENDATIONS AND CONCLUSION

As one of the pioneers of the over the top subscription model, Netflix is a fitting starting point for examining the sustainability of firms in the online television industry. With advertisers shifting their spending away from traditional linear television and toward online content distributors, the need to carefully examine the benefits and potential pitfalls of the business plans of these services becomes apparent. Netflix, along with other OTT providers, faces that challenge of keeping costs low while continuing to increase revenue. Specifically, Netflix could face increasing costs due to industry regulations such as the SAG-AFTRA agreement, a focus on high quality original programming with high production costs, and high international license fees. An increase in competition, reaching a subscriber plateau, and piracy are all factors that could contribute to a decline in revenue for Netflix.

The existing literature related to Netflix specifically was limited and largely focused on Netflix as a DVD subscription service. While there was little research into Netflix as an online video provider, research into optimal pricing for an online subscription service and industries with parallel structures was available. Fruchter and Rao's research presented evidence as to why a dynamic pricing model, in which a subscription fee is charged up front and a usage fee is charged through a subscription period, is a viable option for firms that experience decreasing marginal costs. An analysis of Netflix's cost per subscriber over the past eleven years revealed that Netflix benefits from economies of scale and could, in theory, adapt a dynamic pricing model in which a flat rate was charged at the beginning, and a usage fee, which would start out high and decrease as marginal costs decrease, could be charged in addition.

An analysis of Netflix's available financial data revealed mostly positive signs for the company. Operational costs are scalable, meaning as the company grows it will continue to benefit from economies of scale and marginal cost will decrease. Marginal revenue per customer has also been steadily decreasing since Netflix split its business into two separate entities, DVD rental and online streaming video. When the services split, a lower price for each individual service was introduced, which has meant that Netflix has been making less per customer as a streaming video site as opposed to as a DVD distributor, which was its focus throughout the early 2000s. Netflix has remained committed to its DVD business, however the analysis of financial data suggests this division is rapidly becoming less valuable and bringing in less profit. Netflix should be careful to monitor that business and stop that aspect of service before it stops being profitable.

Another aspect of Netflix's business model that the data revealed to have a positive outlook is international expansion. Netflix is currently using profits from domestic operations to fund international expansions, however growing revenue per international customer suggests overseas operations might soon be profitable themselves. Breaking in to a new international market can be expensive, with new licensing agreements, marketing campaigns, and other foundational costs, but with Netflix moving more quickly toward a widespread international presence as compared to its competitor, it looks to have a competitive advantage in the future.

With increased competition in the online video market, it is becoming increasingly important to differentiate the product being offered. Netflix original series have worked wonderfully to build up the Netflix brand; however, as marginal revenue per customer continues to decline and other competitors become more viable, Netflix must be careful to avoid overspending on original content that will not bring in enough new subscribers. Netflix

subscribers have so far been willing to accept changes to annual costs, but there will come a point at which they will take their business elsewhere if costs become too high. One avenue for further research into the viability of OTT providers could be to look more closely at Netflix's competitors, including Amazon, Hulu, and HBO, and to see what they are doing similarly and what is different, and ultimately to decide what will be the most successful.

Although a thorough analysis of Netflix's financial data reflects positively on the company and its business plan, outside competition is going to be the greatest threat to the future success of the company. With the recent surge in online video services, including a standalone HBO Go option, Netflix will struggle to attract and retain subscribers. Two factors that seem to drive subscribers to Netflix are its low cost and original programming, but if Netflix plans to continue to expand internationally and produce more original content, it will need to raise its low subscription fee. Netflix subscribers are currently enjoying the best of both worlds: high quality programming at a cost much lower than traditional cable, but if that trend is to continue, something will have to give.

Appendix A

Netflix Subscriber Data, 2011-2014

Year/ Quarter	Domestic Trial Streaming Subscribers	Domestic Paid Streaming Subscribers	Total Domestic Streaming Subscribers	International Trial Subscribers	International Paid Subscribers	Total International Subscribers	Total Global Trial Subscribers	Total Paid Streaming Subscribers	Total Streaming Subscribers
11Q1	745,000	3,000,000	3,745,000	127,000	673,000	800,000	872,000	3,673,000	4,545,000
11Q2	958,000	4,780,000	5,738,000	113,000	857,000	970,000	1,071,000	5,637,000	6,708,000
11Q3	940,000	20,510,000	21,450,000	491,000	989,000	1,480,000	1,431,000	21,499,000	22,930,000
11Q4	1,520,000	20,150,000	21,670,000	410,000	1,450,000	1,860,000	1,930,000	21,600,000	23,530,000
12Q1	1,390,000	22,020,000	23,410,000	660,000	2,410,000	3,070,000	2,050,000	24,430,000	26,480,000
12Q2	1,250,000	22,690,000	23,940,000	600,000	3,020,000	3,620,000	1,850,000	25,710,000	27,560,000
12Q3	1,300,000	23,800,000	25,100,000	620,000	3,690,000	4,310,000	1,920,000	27,490,000	29,410,000
12Q4	1,680,000	25,470,000	27,150,000	1,230,000	4,890,000	6,120,000	2,910,000	30,360,000	33,270,000
13Q1	1,260,000	27,910,000	29,170,000	810,000	6,330,000	7,140,000	2,070,000	34,240,000	36,310,000
13Q2	1,190,000	28,620,000	29,810,000	740,000	7,010,000	7,750,000	1,930,000	35,630,000	37,560,000
13Q3	1,160,000	29,930,000	31,090,000	1,110,000	8,080,000	9,190,000	2,270,000	38,010,000	40,280,000
13Q4	1,710,000	31,710,000	33,420,000	1,210,000	9,720,000	10,930,000	2,920,000	41,430,000	44,350,000
14Q1	1,290,000	34,380,000	35,670,000	920,000	11,760,000	12,680,000	2,210,000	46,140,000	48,350,000
14Q2	1,150,000	35,090,000	36,240,000	890,000	12,910,000	13,800,000	2,040,000	48,000,000	50,040,000
14Q3	950,000	36,270,000	37,220,000	1,450,000	14,390,000	15,840,000	2,400,000	50,660,000	53,060,000
14Q4	1,410,000	37,700,000	39,110,000	1,500,000	16,780,000	18,280,000	2,910,000	54,480,000	57,390,000

Appendix B

Netflix Cost and Revenue Data

YEAR/ QTR	Total Domestic Subscribers	Revenue	Net Income	Totals Costs	Technology & Development Costs	Cost of DVD Acquisitions	Cost of Streaming Acquisitions
02Q1	603000	$3,069,000	-$4,054,000	$7,123,000	$3,181,000	$6,161,000	
02Q2	670000	$35,608,000	-$13,429,000	$49,037,000	$3,518,000	$9,641,000	
02Q3	742000	$40,163,000	-$1,695,000	$41,858,000	$3,966,000	$15,314,000	
02Q4		$45,188,000		$45,188,000			
03Q1	1052000	$55,281,000	-$4,521,000	$59,802,000	$4,183,000	$6,409,000	
03Q2	1147000	$63,071,000	$3,313,000	$59,758,000	$4,123,000	$17,027,000	
03Q3	1291000	$71,278,000	$3,303,000	$67,975,000	$4,738,000	$14,367,000	
03Q4				$0			
04Q1	1932000	$99,823,000	-$57,900,000	$157,723,000	$5,039,000	$23,570,000	
04Q2	2093000	$119,710,000	$2,891,000	$116,819,000	$5,652,000	$24,083,000	
04Q3	2229000	$140,414,000	$18,925,000	$121,489,000	$6,325,000	$31,986,000	
04Q4							
05Q1	3018000	$152,246,000	-$8,814,000	$161,060,000	$7,155,000	$33,040,000	
05Q2	3196000	$164,027,000	$5,684,000	$158,343,000	$8,648,000	$29,218,000	
05Q3	3592000	$172,740,000	$6,946,000	$165,794,000	$8,955,000	$25,767,000	
05Q4							
06Q1	4866000	$224,126,000	$4,404,000	$219,722,000	$11,206,000	$29,842,000	
06Q2	5169000	$239,351,000	$17,037,000	$222,314,000	$12,043,000	$46,142,000	
06Q3	5662000	$255,950,000	$12,781,000	$243,169,000	$11,929,000	$37,255,000	
06Q4							
07Q1	6797000	$305,320,000	$9,864,000	$295,456,000	$15,715,000	$68,541,000	
07Q2	6742000	$303,693,000	$25,580,000	$278,113,000	$18,907,000	$64,337,000	
07Q3	7028000	$293,972,000	$15,732,000	$278,240,000	$18,216,000	$39,452,000	
07Q4							
08Q1	8243000	$326,813,000	$13,378,000	$313,435,000	$20,516,000	$65,123,000	
08Q2	8411000	$337,614,000	$26,579,000	$311,035,000	$22,186,000	$55,175,000	
08Q3	8672000	$341,269,000	$20,371,000	$320,898,000	$23,368,000	$41,564,000	
08Q4	9390000	$360,000,000	$23,000,000	$337,000,000			
09Q1	10310000	$394,000,000	$22,000,000	$372,000,000	$24,200,000	$46,499,000	
09Q2	10600000	$409,000,000	$32,000,000	$377,000,000	$27,119,000	$43,224,000	
09Q3	11110000	$423,000,000	$30,000,000	$393,000,000	$30,014,000	$47,273,000	
09Q4	12270000	$445,000,000	$31,000,000	$414,000,000	$33,209,000	$57,048,000	$22,785,000
10Q1	13970000	$494,000,000	$32,000,000	$462,000,000	$37,399,000	$36,902,000	--
10Q2	15000000	$520,000,000	$44,000,000	$476,000,000	$37,863,000	$24,191,000	$66,157,000
10Q3	16800000	$553,000,000	$38,000,000	$515,000,000	$42,108,000	$29,900,000	$115,149,000

10Q4	19500000	$596,000,000	$47,000,000	$549,000,000	$45,959,000	$32,908,000	$174,429,000
11Q1	22800000	$719,000,000	$60,000,000	$659,000,000	$50,905,000	$24,191,000	$192,307,000
11Q2	24590000	$789,000,000	$68,000,000	$721,000,000	$57,865,000	$19,065,000	$612,959,000
11Q3	23790000	$822,000,000	$62,000,000	$760,000,000	$69,480,000	$20,826,000	$539,285,000
11Q4	24400000	$876,000,000	$35,000,000	$841,000,000	$80,783,000	$23,144,000	$976,545,000
12Q1	33500000	$870,000,000	-$5,000,000	$875,000,000	$82,801,000	$13,528,000	$764,893,000
12Q2	33180000	$889,000,000	$6,000,000	$883,000,000	$81,547,000	$8,012,000	$374,252,000
12Q3	33710000	$905,000,000	$8,000,000	$897,000,000	$82,521,000	$8,586,000	$744,714,000
12Q4	35374000	$945,000,000	$8,000,000	$937,000,000	$82,139,000	$18,149,000	$631,647,000
13Q1	37153000	$1,023,940,000	$3,000,000	$1,020,940,000	$91,975,000	$21,193,000	$591,941,000
13Q2	37318000	$1,069,000,000	$29,000,000	$1,040,000,000	$93,126,000	$14,023,000	$595,454,000
13Q3	38238000	$1,106,000,000	$32,000,000	$1,074,000,000	$95,540,000	$15,471,000	$878,314,000
13Q4	40350000	$1,175,000,000	$48,000,000	$1,127,000,000	$98,128,000	$15,240,000	$986,049,000
14Q1	42322000	$1,270,089,000	$53,000,000	$1,217,089,000	$110,310,000	$14,914,000	$749,399,000
14Q2	42502000	1340407000	$71,018,000	$1,269,389,000	$115,182,000	$20,981,000	$813,384,000
14Q3	43206000	$1,409,597,000	$59,000,000	$1,350,597,000	$120,953,000	$15,530,000	$1,202,484,000
14Q4	44877000	$1,485,000,000	$83,000,000	$1,402,000,000	$125,876,000	$23,365,000	$1,008,262,000

BIBLIOGRAPHY

Adhikari, Vijay Kumar, Yang Guo, Fang Hao, Matteo Varvello, Volker Hilt, Moritz Steiner and Zhi-Li Zhang "Unreeling Netflix: Understanding and improving multi-cdn movie delivery." *INFOCOM, 2012 Proceedings IEEE*. IEEE, 2012.

Anderson, Nate. "Netflix Offers Streaming Movies to Subscribers." *ARS Technica*. Conde Nast, 16 Jan. 2007. Web. 14 Feb. 2015.

Andreeva, Nellie. "Netflix To Enter Original Programming With Mega Deal For David Fincher-Kevin Spacey Series 'House Of Cards'" *Deadline*. N.p., 15 Mar. 2011. Web. 15 Feb. 2015.

Bass, Frank M. "A New Product Growth For Model Consumer Durables." Management Science (pre-1986) 15.5 (1969): 215. Web. 18 Feb. 2015.

Bassamboo, Achal, and Ramandeep Singh Randhawa. *Optimal control in a Netflix-like closed rental system*. McCombs School of Business, University of Texas at Austin, Austin, 2007.

Bayout, Jennifer. "Netflix Takes Over Wal-Mart's Online DVD Rental Business." *The New York Times*. The New York Times, 19 May 2005. Web. 15 Feb. 2015.

"Blockbuster Going after NetFlix with Home-delivery Option." *CNNMoney*. Cable News Network, 11 Aug. 2004. Web. 15 Feb. 2015.

Cunningham, Stuart and Jon Silver. *Screen Distribution and the New King Kongs of the Online World*. (July 2013) Palgrave Macmillan. 18 Feb. 2015.

Deadline Team. "Details Emerge About SAG-AFTRA's "Historic" New Film And TV Contract."

Deadline. N.p., 04 July 2014. Web. 28 Mar. 2015.

Gerbag, Nancy. "The End of Advertising as we Know it." 1 Vol. New York, NY: Springer New York, 2009. 29-55.

Geuss, Megan. "Netflix Launches Streaming in Cuba." *ARS Technica*. Conde Nast, 9 Feb. 2015. Web. 1 Mar. 2015.

Fisher, Mark. "Amazon's Streaming Video Surpasses Hulu and Apple." Qwilt. N.p., 04 Apr. 2014. Web. 28 Mar. 2015.

Fruchter, Gila E. and Ram C. Rao. "Optimal Membeship Fee and Usage Price Over Time for a Network Service." *Journal of Service Research* 4 (2001): 3-14. Web. 15 Feb. 2015.

Fruchter, Gila E., and Simon P. Sigue. "Dynamic Pricing For Subscription Services." *Journal Of Economic Dynamics And Control* 37.11 (2013): 2180-2194. Web. 31 Jan. 2015.

Helft, Miguel. "Netflix to Deliver Movies to the PC." *The New York Times*. The New York Times, 15 Jan. 2007. Web. 15 Feb. 2015.

Hunt, Amber. "For Millions of Cord Cutters, Cable TV Fades to Black." *USA Today*. Gannett, 24 Aug. 2014. Web. 05 Mar. 2015.

Levine-Weinberg, Adam. "5 Things Netflix Management Wants You to Know." *USA Today*. Gannett, 07 Feb. 2015. Web. 05 Mar. 2015.

Levine-Weinberg, Adam. "Netflix's International Expansion Will Be Expensive." The Motley Fool. Interactive Data Managed Solutions, 13 Dec. 2013. Web. 27 Mar. 2015.

Littleton, Cynthia. "Leslie Moonves: Showtime Streaming Service Coming in 'Not Too Distant Future'" *Variety*. N.p., 11 Mar. 2015. Web. 09 Apr. 2015.

Luckerson, Victor. "Netflix Wants New Original Content Every Three Weeks." Time. Time, 14 Dec. 2014. Web. 04 Jan. 2015.

Lyons, Daniel A. "Internet Policy's Next Frontier: Usage-Based Broadband Pricing." *Federal Communications Law Journal*66.1 (2013): 1-45. *Communication & Mass Media Complete*. Web. 3 Feb. 2015.

Maney, Kevin. "Netflix Plans Blockbuster Future of Serving Movie Watchers."*USA Today*. USA Today, 16 June 2004. Web. 15 Feb. 2015.

Narang, Nitin. "Concept Series : What is the Difference between OTT and IPTV". *Researcher on TV technology*. Media Entertainment Info. Nd.

Netflix Annual Report. 20 Jan. 2015. Web. 13 Feb. 2015.

"New Media FAQs." *New Media FAQs*. SAGAFTRA, n.d. Web. 05 Mar. 2015.

"Number of Illegal Downloads of Netflix's Original Series 2014." *Statista*. Statista, n.d. Web. 01 Mar. 2015.

"Over the Top Services (OTT)." *Over the Top Services (OTT)*. Pace, n.d. Web. 05 Mar. 2015.

Prince, Jeffrey, and Shane M. Greenstein. "Measuring Consumer Preferences for Video Content Provision via Cord-Cutting Behavior." TPRC, 2013.

Ryan, Maureen. "'Transparent' On Amazon Is Terrific And Belongs In TV's Top Tier." The Huffington Post. TheHuffingtonPost.com, 25 Sept. 2014. Web. 31 Mar. 2015.

Small, Oliver. "Reshaping The Music Distribution Model: An Itunes Opportunity." Journal Of Media Business Studies 9.4 (2012): 41-68. Communication & Mass Media Complete. Web. 15 Apr. 2014.

Smith, Ethan. "Netflix Separates DVD and Streaming Services." *WSJ*. The Wall Street Journal, 19 Sept. 2011. Web. 14 Feb. 2015.

Spangler, Todd. "Netflix to Expand Into Original Movies, Will Double Spending on Originals in 2014." *Variety*. Variety Media, 21 Oct. 2013. Web. 01 Mar. 2015.

Spangler, Todd. "Viacom Inks Pact with Sony for Internet TV Service." Variety. N.p., 10 Sept. 2014. Web. 07 Apr. 2015.

Spanos, Brittany. "HBO and Apple Partner on Standalone Streaming Service." *Rolling Stone*. N.p., 09 Mar. 2015. Web. 31 Mar. 2015.

"TV Cost & CPM Trends." Local Media Marketing Solutions. Television Bureau of Advertising, Jan. 2015. Web. 31 Mar. 2015.

Wallace, Gregory. "Netflix Has Big Plans to Produce More Original Series."*CNNMoney*. Cable News Network, n.d. Web. 05 Mar. 2015.

Wallenstein, Andrew. "Netflix Series Spending Revealed." *Variety*. N.p., 08 Mar. 2013. Web. 07 Apr. 2015.

Waterman, David, Ryland Sherman, and Sung Wook Ji. "The Economics Of Online Television: Industry Development, Aggregation, And "TV Everywhere"." *Telecommunications Policy* 37.9 (2013): 725-736. Web. 12 Feb. 2015.

Zambelli, Alex. "A History of Media Streaming and the Future of Connected TV." *The Guardian*. Guardian News and Media, 1 Mar. 2013. Web. 1 Mar. 2015.

ACADEMIC VITA

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The Pennsylvania State University, Schreyer Honors College *University Park, PA* **May 2015**
Bachelor of Arts in Telecommunications, Economics; International Studies Minor
City University of London *London, United Kingdom*

Media Experience

Centre County Report *University Park, PA* **Jan. 2015-Present**

- **Director & Technical Director**
  Live-direct a weekly, thirty-minute news show broadcasted to 29 central Pennsylvania counties

NBC Universal *Miami, FL* **May 2014-Aug. 2014**

- **Programming Intern,** *Universal Networks International*
  Devised and implemented programming strategies for Syfy, Universal Channel, and Studio Universal in Latin America that increased weekend ratings for the channels;; analyzed weekly ratings reports to target weak spots in lineups; screened network pilots and independent films

Barcroft Media *New York, NY & London, UK* **May 2013-Dec. 2013**

- **Development and Production Intern, London** *(Sept. 2013-Dec. 2013)*
  Researched and developed concepts for documentaries and reality television programming for TLC, Channel 4, and other clients; scouted locations; planned travel and budgets for shoots in US and UK
- **Production and Editorial Intern, New York** (*May 2013-Aug. 2013)*
  Supervised field shoots in NYC from pre-production to post-production; wrote articles that appeared in the Huffington Post, NY Daily News, Sun, and other online outlets

The Daily Collegian *University Park, PA* **Sept. 2012-Present**

- **Arts & Entertainment Editor** (*Dec. 2012-Present)*
  Guide a staff of 20 reporters in seeking engaging and relevant arts stories to ensure thorough local and national coverage; edit and proofread stories for content and style; maintain multimedia arts blog to compliment daily print coverage; work with board of editors to develop editorial columns
- **Copy Desk Chief** (*Aug. 2014-Dec. 2014)*
  Edited stories, headlines, captions and other elements according to Associated Press style for daily and weekly newspapers; designed pages using InDesign; managed a staff of editors to ensure the meeting of nightly deadlines 5 nights per week; edited and published stories for the website
- **Arts & Entertainment Reporter** (*Sept. 2012-May 2014)*
  Wrote a minimum of three articles weekly; interviewed performing artists, reviewed movies, music, and television

Awards and Recognition

Dean's List all semesters • Academic Excellence Scholarship • President's Freshman Award • Liberal Arts Enrichment Fund Recipient • Schreyer Honors College Travel Grant Recipient • Chapel Executive Intern

Volunteer Experience

Schreyer Honors College Tour *Sept. 2011-Pressent*

- Conduct comprehensive tours of all honors housing, offices, and central campus; offer information about campus life, academics, and extracurricular activities to prospective honors students and their families

THON Communications Committee *Sept. 2011-Feb. 2013*

- Supervised 30 committee members during a 46-hour dance marathon that raised over $12 million for cancer research

Schreyer Honors College Orientation Mentor *Aug. 2012*

- Planned and executed a finale event for more than 300 incoming students and mentored 15 incoming freshmen honor students throughout their first year