Netflix: The Making of an Ecommerce Giant

This article describes the business model established by Netflix, a DVD-by-mail service, and how it surpassed competitors like Wal-Mart and Blockbuster to become the market leader. It introduces the “long tail” concept, and how it relates to Netflix’s ability to offer customers a huge selection of movies. The article also takes a look at the operations of Netflix and the scale advantages of the firm. The article concludes by discussing the shift from atoms to bits and how it is impacting a wide range of industries, Netflix included.

1. Introduction

* Understand the basics of the Netflix business model.
* Recognize the downside the firm may have experienced from an early IPO.
* Appreciate why other firms found Netflix’s market attractive, and why many analysts incorrectly suspected Netflix was doomed.
* When Netflix went public, disclosure rules forced it to reveal just how profitable it was.
* Netflix was an Internet **pure play** without a storefront and with an overall customer base that seemed microscopic compared to those of behemoths like Blockbuster and Wal-Mart.
* Newcomers mimicked the firm with cheaper rival efforts forcing Netflix to cut prices.
* One year later, after surviving a price war and increased costs, Netflix emerged to see Wal-Mart leave the DVD-by-mail business, and to find Blockbuster in deep financial distress.
* Netflix had not only survived, under the leadership of CEO Reed Hastings, it had grown larger and recorded record profits.
* Hastings, a man who prior to Netflix had already built and sold one of the fifty largest public software firms in the United States, had clearly established himself as one of America’s most capable and innovative technology leaders.

**1.1 Why Study Netflix?**

* Studying Netflix gives us a chance to examine how technology helps firms craft and reinforce a competitive advantage.

**How Netflix Works**

* The model Netflix settled on was a DVD-by-mail service that charged a flat-rate monthly subscription rather than a per-disc rental fee. Customers don’t pay mailing expenses and there are no late fees.
* Netflix offers nine different subscription plans, starting at less than five dollars. dollars.
* Videos arrive in red Mylar envelopes. After tearing off the cover to remove the DVD, customers reveal prepaid postage and return address.
* When done watching videos, consumers just slip the DVD back into the envelope, reseal it with a peel-back sticky-strip, and drop the disc in the mail.
* Users make their video choices in their “request queue” at Netflix.com. If a title isn’t available, Netflix simply moves to the next title in the queue.
* Consumers use the Web site to rate videos they’ve seen, specify their movie preferences, get video recommendations, check out DVD details, and even share their viewing habits and reviews.

**Study Questions**

1. How does the Netflix business model work?

Answer: The Netflix business model works in the following manner:

* + The customer chooses one of nine monthly subscription plans starting at $4.99. For $16.99 the customer gets three movies at a time with unlimited returns each month.
  + Videos arrive in red Mylar envelopes that also contain prepaid postage and the return address.
  + After watching, the customer places the DVD back in the self-seal envelope and drops it in the mail.
  + Customers make their viewing choices in their request queue. If a title isn’t available, Netflix simply moves to the next title in the queue.
  + Customers use the Netflix Web site to rate movies they’ve seen, specify movie preferences, get video recommendations, check out DVD details, and share their viewing habits and reviews.
  + In 2007, Netflix added a “Watch Now” button to permit instant streaming of selected videos to PCs.

1. Which firms are or have been Netflix’s most significant competitors? How do their financial results or performance of their efforts compare to Netflix’s efforts?

Answer: Netflix’s most significant competitors have been Wal-Mart and Blockbuster. Wal-Mart left the DVD-by-mail business, and Blockbuster is in deep financial distress after losing billions of dollars. Not only did Netflix hold on to its customers, it grew bigger, recording record profits.

1. What recent appointment did Reed Hastings accept in addition to his job as Netflix CEO? Why is this appointment potentially important for Netflix?

Answer: Reed Hastings accepted an appointment to the Board of Directors of Microsoft. A possible outcome of this appointment is a good relationship whereby Netflix might distribute its streaming DVDs via Microsoft’s Xbox technology.

1. Why did Wal-Mart and Blockbuster managers, as well as Wall Street analysts, underestimate Netflix? What issues might you advise analysts and managers to consider so that they avoid making these sorts of mistakes in the future?

Answer: Wal-Mart, Blockbuster, and Wall Street underestimated Netflix because it was a dot.com without a brick-and-mortar presence, and had a comparatively small customer base. Their estimates probably did not give enough weight to Netflix’s superior business model, the quality of Netflix’s staff, and the leadership provided by Reed Hastings.

2. Tech and Timing: Creating Killer Assets

* Understand how many firms have confused brand and advertising, why branding is particularly important for online firms, and the factors behind Netflix’s exceptional brand strength.
* Understand the “long tail” concept, and how it relates to Netflix’s ability to offer the customer a huge (the industry’s largest) selection of movies.
* Know what collaborative filtering is, how Netflix uses collaborative filtering software to match movie titles with the customer’s taste, and in what ways this software helps Netflix garner sustainable competitive advantage.
* List and discuss the several technologies Netflix uses in its operations to reduce costs and deliver customer satisfaction and enhance brand value.
* Understand the role that scale economies play in Netflix’s strategies, and how these scale economies pose an entry barrier to potential competitors.
* Understand the role that market entry timing has played in the firm’s success.

**Overview**

* Netflix customers are extremely loyal and the firm repeatedly ranks at the top of customer satisfaction surveys.
* Advertising can build awareness, but brands are built through customer experience.
* Netflix’s brand is built around huge selection, fast shipping, no-brainer ease of use and convenience, and fair price. Technology drives all of these capabilities.

**2.1 Selection: The Long Tail in Action**

* Customers have flocked to Netflix because of its staggering selection of over 100,000 DVDs.
* A traditional store has a breakeven point that is determined by the number of potential customers in the area the store serves versus the store size, the inventory it can stock, the payback from that inventory, and the cost to build, own and operate the store.
* Internet video businesses are not subject to the same physical geographic and shelf space constraints as brick-and-mortar stores.
  + Virtual stores need only a few highly automated warehouses.
  + Virtual stores that sell digital products don’t even need warehouses.
* More money is made by selling the obscure stuff than the hits.
  + Roughly 75 percent of the DVD titles shipped by Netflix are back-catalog titles, not new releases.
* The phenomenon whereby firms can make money by selling a near-limitless selection of less-popular products is known as the **long tail**.
* There are benefits of having a long tail.
  + Selection attracts customers.
  + The Internet allows large-selection inventory efficiencies that offline firms can’t match.
* The long tail works because the total cost of production and distribution drop to a point where it becomes economically viable to offer a huge selection.
* The long tail effect counters the effects of geographically dispersed audiences.
* Netflix has used its “long tail” advantage to craft a business model that creates close ties with film studios.
  + Studios earn a percentage of the subscription revenue for every DVD sent out.
  + Netflix gets to buy DVDs at a very low cost from the studios.
  + Netflix is able to find audiences for the studios’ films without the studios having to make additional marketing expenditures.

**The VCR, the Real “Killer App”?**

* Netflix’s coziness with movie studios is noteworthy, given that the film industry has often viewed new technologies with a suspicion bordering on paranoia.
* The former head of the Motion Picture Association of American (MPAA) once lobbied the U.S. Congress to limit the sale of home video recorders.
* Today, home video brings in about two times box office earnings.

**2.2 Cinematch: Technology Creates a Data Asset that Delivers Profits**

* To match content with customers, Netflix uses a proprietary recommendation system called Cinematch.
* Each time a DVD is returned by a customer, the system asks the customer to rate it on a scale of one to five stars.
* Cinematch develops a map of user ratings and steers the user toward titles preferred by people with similar tastes—a process known as **collaborative filtering**.
* While collaborative filtering software is a powerful mathematical tool, it can be mimicked by competitors, and is therefore by itself is not the stuff competitive advantage is built on.
* The competitive advantage that Cinematch gives Netflix is impossible-to-match data.
  + Over three billion ratings
  + One million new ratings added each day
* Users trust and value Cinematch and recommended titles make up over 60 percent of the content users place in their queues.
* The data provided by Cinematch is also a switching cost.
  + Switching from Netflix to Blockbuster leaves the average customer without the benefit of over two hundred films they’ve rated.
  + A switch to Blockbuster exposes the customer to less accurate ratings because Blockbuster has less data.
* A major benefit from Cinematch is the low **churn rate**—the rate at which customers leave a product or service.
  + A low churn rate is important because it costs more to get a new customer than to keep an existing one.
  + Netflix’s churn rate in 2008 was in the vicinity of three percent; in 2007 the mobile phone industry had a churn rate of approximately thirty-nine percent.
* Netflix’s marketing costs benefit from satisfied customers.
  + Referrals are trusted more than advertisements.

**The Netflix Prize**

* Netflix launched a **crowdsourcing** effort known as The Netflix Prize
  + The goal was to improve Cinematch’s rating accuracy by 10 percent.
  + A one million dollar prize would be given to the individual or team who achieved this goal.
  + The effort attracted over 30,000 teams from 170 countries.
  + To make the effort possible, Netflix provided the entrants an actual, large database of user ratings.
  + The winning “team” was actually a coalition of four teams.
  + Innovations offered by other contest participants were incorporated into Cinematch even before the prize was won.

**Patron Saint of the Independent Film Crowd**

* Many critically acclaimed films that failed to be box office hits have gained a second life on Netflix, netting significant revenue for the studios, with no additional studio marketing.
* Netflix has occasionally acquired small market titles for exclusive distribution.

**2.3 A Look at Operations**

* Technology lies at the heart of Netflix’s warehouse operations.
  + Netflix has a **network of fifty-eight ultrahigh-tech distribution centers** that collectively handle in excess of **1.8 million** DVDs each day.
  + These distribution centers are all located within driving distance of 119 USPS processing and distribution facilities.
  + By 4:00am each weekday Netflix trucks collect the day’s DVD shipments from the USPS facilities and return them to the nearest Netflix center.
  + The DVDs are processed by custom in-out sorters that trigger e-mails to the senders.
  + Scanners pick out incoming titles for other users and place these titles into a sorted outbound pile with new addressed red envelopes.
  + In order to get the **lowest first-class postal rates**, Netflix presorts all outgoing mail before dropping it off at the USPS facilities.
  + All DVDs are **hand-inspected** for cracks and smudges.
  + Turnaround time for a typical DVD is eight hours.
  + Netflix services (including receipt, processing, and delivery) over 97 percent of its customers within a two-day window.
  + With the addition of Saturday processing, a customer with the “three DVD at a time” plan could watch a movie a day and never be without a new title.
  + **Warehouse processes are linked to Cinematch** in order to recommend movies that are in stock so users don’t have to wait.
* Quality is an important component of the Netflix process.
  + Every warehouse worker gets a free DVD player and Netflix subscription so that they better understand the process from the customer’s perspective and can make suggestions for improvement.
* By focusing on technology design and process improvements, Netflix has been able to reduce the number of customer representatives even as subscriptions have increased.

**2.4 Killer Asset Recap: Understanding Scale**

* Netflix’s size gives it a huge scale advantage.
  + Firm’s with **scale economies are in the best position to lower prices**, and spend more on customer acquisition, new features, and other efforts.
  + Smaller rivals don’t have the resources to compete, and established firms end up straddling markets.
* Blockbuster’s in-store rental business has been a money loser.
  + In 2005, Netflix **forced Blockbuster to drop late fees** at cost of about four hundred million dollars.
  + Between 2006 and 2007, Blockbuster closed over 570 stores.
  + By 2008 Blockbuster had been in the red for ten of the prior eleven years.
  + **Blockbuster has had to significantly reduce promotion expenditures and raise subscription prices.**
* By moving first, Netflix gained scale advantages in selection, distribution network size, customer base, and data assets.

**Study Questions**

1. What are Netflix’s sources of competitive advantage?

Answer: Netflix’s sources of competitive advantage include brand, large selection of movies (the “long tail”), their data asset (Cinematch), and scale of operation (customer base and distribution network size).

1. Does Netflix have a strong brand? How is a strong brand built?

Answer: Netflix has a very strong brand. Netflix customers are rabidly loyal and the firm repeatedly ranks at the top of customer satisfaction surveys. Netflix’s **churn rate in 2008 was in the vicinity of three percent;** in 2007 the mobile phone industry had a churn rate of approximately thirty-nine percent. Building a great brand, especially one online, starts with offering exceptional customer value.

1. Scale advantages are advantages related to size. In what key ways is Netflix “bigger” than the two major competitors who tried to enter the DVD-by-mail market?

Answer: Netflix enjoyed scale advantages over both Blockbuster and Wal-Mart due to a larger selection (the “long tail”), customer base, and data (customer film ratings).

1. What is the **long tail**? How “long” is the Netflix tail compared to traditional video stores?

Answer: The phenomenon whereby firms can make money by selling a near-limitless selection of less-popular products is known as “the long tail”. A traditional video store like Blockbuster stocks roughly 3000 popular videos while Netflix is able to offer its customers a selection of over 100,000 titles and a large chunk of its revenue comes from selling the less popular titles.

1. What “class” of software does Netflix use to make movie recommendations? Which key competitive resource does this software “create”? What kinds of benefits does this provide to the firm? What benefits does it provide to Netflix’s suppliers?

Answer: Netflix uses **collaborative filtering** software to make movie recommendations called Cinematch. Collaborative filtering **creates a data and switching cost resource that is valuable**, rare, imperfectly imitable, and non-substitutable. The data provided by Cinematch develops a map of user ratings, and steers the user toward titles preferred by people with similar tastes. In turn, this personalizes the individual customer’s experience, builds brand, and creates switching costs. Collaborative filtering allows Netflix to “discover” and recommend less popular (and even obscure) films owned by studios, thereby earning revenues for the studios that they would have not received otherwise.

1. Could a new competitor match Netflix’s recommendation software? If it did, would this create a threat to Netflix? Why or why not?

Answer: It is possible for a competitor to write software that is as good as, or is even better than, Cinematch. However, without Netflix’s mountain of data (over two billion ratings), the software would pose little or no threat.

1. What is the Netflix churn rate and what are the reasons behind this rate?

Answer: **Churn is a marketing term referring to the rate at which customers leave a product or service.** A low churn is usually the key to profitability because it costs more to acquire a customer than to keep one. However, the year after Blockbuster and Wal-Mart launched with copycat efforts, the rate at which customers left Netflix actually fell below 4 percent, an all-time low. And the firm’s churn rates have continued to fall over time. By the middle of 2008, rates for customers in Netflix most active regions of the country were below 3 percent, meaning fewer than three in one hundred Netflix customers canceled their subscriptions each year. The number of choices offered by Netflix, prompt delivery, and good service has created satisfied customers. This is the reason for low churn rate.

1. Netflix uses technology to coordinate the process of sorting and dropping off DVDs for the U.S. Postal service. This application of technology speeds delivery. What other advantage does it give the firm?

Answer: The application of technology to coordinate the process of sorting and delivering DVDs to the U.S.P.S. processing and distribution facilities helps speed delivery to the customer and also insures that Netflix gets the lowest possible first class postage rates.

1. How has Netflix improved its customer service operation? What results reflect this improvement?

Answer: Every warehouse employee gets a free DVD player and Netflix subscription so that they better understand the operation from the customer’s perspective and can make suggestions for improvement. By paying attention to technology design and process improvements, Netflix has been able to reduce the number of customer representatives even as subscriptions have increased. This has resulted in increased customer satisfaction and a very low churn rate.

3. From Atoms to Bits: Opportunity or Threat?

* Understand the shift from atoms to bits, and how this is impacting a wide range of industries.
* Recognize the various key issues holding back streaming video models.
* Know the methods that Netflix is using to attempt to counteract these challenges.

Outline

* Nicholas Negroponte said in his essay, **atoms to bits**, that most media products are created as bits, i.e., digital files of ones and zeroes.
* The shift from atoms to bits is realigning nearly every media industry.
  + Newspapers, books, music, and videos can now be delivered without their former atom-constituted “containers”.
  + Apple dominates music sales without selling a single CD, and Amazon’s Kindle can display books from a vast library of 275,000 titles.
* Video is already going digital but Netflix became profitable by selling atoms (DVDs).
* Despite Netflix’s success, its stock has displayed extreme volatility as investors puzzle the future impact of the shift from delivery via DVDs to delivery via digital files.
* **When the DVD dies, the high-tech shipping and handling infrastructure built by Netflix will become worthless**.
* Netflix has recognized this threat (opportunity), and in 2007 initiated content delivery via Internet streaming video.

**3.1 Access to Content**

* Two years after Netflix launched its streaming video option, only 17,000 videos were offered.
* This paucity of titles is partly due to complicated legal issues involved in securing the digital distribution rights for all of the content that makes up a movie.
* A system called **windowing** also restricts the number of titles available for the streaming video option.
  + Content is available to a given distribution channel for a specified time window, and under a variety of revenue models.
  + Pay TV channels have negotiated exclusive access to content. This exclusivity means that even if a title becomes available for streaming, it may disappear when a pay TV window opens.
  + A 2008 partnership with the Starz network helped provide Netflix with access to additional content.
  + While studios embrace the audience-finding and revenue-sharing advantages of Netflix, they also don’t want to undercut higher revenue early windows.
* Wal-Mart, which accounts for about 40 percent of all DVD sales, ***uses its bargaining power*** to “encourage” studios to hold content from competing windows, or limit offering titles at competitive pricing during the peak new release period.

**3.2 But How Does It Get to the TV?**

* Netflix explored two alternatives for delivering content:
  + An internal team at Netflix developed a prototype set top box.
    - Most customers aren’t enthusiastic about purchasing yet another box for their set top.
    - Selling hardware would introduce a new set of inventory, engineering, marketing, distribution, and competitive complexities.
  + The firm developed a software platform and made it available to firms seeking to build Netflix access into their devices.
    - Today Netflix streaming is baked into televisions and DVD players from LG, Panasonic, Samsung, Sony, Toshiba, and Vizio, among others.
* If a significant portion of households end up with a Netflix-ready Blu-ray player, Netflix will have built a huge base for its video streaming business.
* The race for delivering bits to the television is still uncertain as business models vary significantly:
  + Apple offers only video purchases for Apple TV.
  + Amazon and Microsoft offer online rentals and purchase services to get content to the TV via TiVo and Xbox, respectively.
  + Hulu is a free service that derives its revenues from ads.
  + Blockbuster streams over TiVo.
  + Netflix offers an unlimited monthly subscription streaming plan for $8.99.
* When the delivery model finally shifts to streaming, it will eliminate much of the cost associated with shipping and handling.
* Negotiating licensing arrangements for streaming video is both difficult and expensive.
  + Rates for streaming licenses are typically inconsistent and can be based on flat fees for unlimited streams, per-stream fees, fees for a given number of streams, or a combination of fees.
  + Some vendors have been asking as much as four dollars per stream.
* The switch to Blu-ray DVDs means that Netflix will be forced to carry two sets of video inventory: standard and high-def.
  + This added service may attract new customers, and help prevent subscriber defections to competitors.
  + More customers available to watch streaming content may give Netflix more leverage when negotiating licensing arrangements with the studios.
* The shift from atoms to bits will be a hybrid transition that takes place over several years.

**Study Questions**

1. What are the most significant long-term threats to Netflix? How is Netflix trying to address these threats? What obstacles does the firm face in dealing with these threats?

Answer: The biggest long-term threat facing Netflix is the shift from atoms (DVDs) to bits (streaming video). Netflix is dealing with this threat by offering streaming video via its “Watch Now” feature. The initial service suffered from two limitations: not enough content, and the difficulty in delivering the content to a television. Netflix is attempting to deal with the former by using its brand and goodwill to negotiate licensing agreements with studios to gain access to content. However, negotiating licensing arrangements for streaming video is both difficult and expensive.

An internal team at Netflix developed a prototype set top box that Hastings (the CEO) himself supported offering. But most customers aren’t enthusiastic about purchasing yet another box for their set top and selling hardware would introduce an entirely new set of inventory, engineering, marketing, distribution, and competitive complexities. Netflix eventually developed a software platform and made it available to firms seeking to build Netflix access into their devices. Today Netflix streaming is baked into televisions and DVD players from LG, Panasonic, Samsung, Sony, Toshiba, and Vizio, among others.

1. Who are the rivals to Netflix’s “Watch Now” effort? Do any of these firms have advantages that Netflix lacks? What are these advantages?

Answer: Rivals to Netflix’s “Watch Now” effort include: (1) Apple with a model based on rentals that can be played on Apple TV or iPods, (2) Amazon and Microsoft who offer online rentals and purchase services to get content to the TV via TiVo and Xbox, respectively, (3) Hulu, a free service that derives its revenues from ads that run like TV commercials, and (4) Blockbuster, who streams over TiVo.

Presently, all of these firms seem to have a clearer and better established path to the living room TV than does Netflix.

1. Why would a manufacturer of DVD players be motivated to offer the Netflix “Watch Now” feature in its products?

Answer: Manufacturers of DVD players might be motivated to offer Netflix’s “Watch Now” feature in order to benefit from Netflix’s large and growing user base and the varieties of titles that Netflix offer. If a large number of buyers want access to Netflix offerings, a manufacturer of DVD players who offers the desired feature is likely to benefit through increased sales.

1. Wal-Mart backed out of the DVD-by-mail industry. Why does the firm continue to have so much influence with the major film studios? What strategic asset is Wal-Mart leveraging?

Answer: Wal-Mart, which accounts for about 40 percent of all DVD sales, uses its considerable bargaining power to “encourage” studios to hold content from competing windows, or limit offering titles at competitive pricing during the peak new release period. This is an example of leveraging scale (and distribution channels) as a strategic asset.