Cord Cutting: A Digital Revolution of Media Consumption

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Abstract

The traditional pay television industry has captivated American audiences for over 80 years. The introduction of over-the-top streaming services in 2007 has structurally altered the long-established, direct model of video content reception. “Cord cutting,” which refers to the cancellation of pay TV subscriptions and receiving content primarily over the Internet, has accelerated over the past few years. For a small price, such services as Netflix, Amazon Prime, and Hulu offer à la carte, on-demand programming and supply a wide variety of content without time restrictions or linear schedules. Mostly occurring among the millennial generation, cord cutting is gradually disrupting the model of the MVPD business. This digital shift has brought upon opportunity of viewing alternatives, influenced consumer-viewing habits, and radically changed the media marketplace.

Cord Cutting: A Digital Revolution of Media Consumption

Traditional pay television was once the ultimate entertainment necessity for homes across America. Insatiable viewers were hooked on their TV providers, whose signals provide a plethora of channels and packaged content. To receive pay TV, consumers simply pay a monthly subscription fee to a multichannel video programming distributor (MVPD), whether it is a direct broadcast satellite (DBS) provider like DirecTV or Dish, a cable provider like Comcast or Time Warner Cable, or a telephone company provider like Verizon FiOS or AT&T U-Verse. Since 2010, there has been a growing rise in “cord cutting” that has adversely affected pay TV’s industry margins. Cord cutting is the process of cancelling MVPD subscriptions and replacing it with either over-the-air (OTA) free broadcasting, or, more commonly, over-the-top (OTT) streaming services using high-speed Internet (“Definition of Cord Cutting,” n.d.). Some of the most popular alternatives include OTT services like Netflix, Amazon Prime, Hulu, and HBO Now.

It is absolutely necessary to be informed about this topic because the trend has sculpted the industry’s streaming media dynamic and ultimately revolutionized television consumption entirely. Cord cutting has become a prevalent topic of debate among all leading media companies. While many industry executives view these changes as a disruption and threat to the traditional pay TV industry, others view it as an exciting time in programming and entertainment, and use it as an opportunity for growth. The purpose of this paper is to generate a better understanding of the cord-cutting phenomenon. The goal is to explore the shift in media consumption habits along with its implications, specifically regarding the future of pay TV. The first portion of this paper will discuss the evolution of television consumption and the rise of cord cutting. Next, it will give an explanation of cord cutter demographics and statistics. Then, it will provide a rationale regarding why exactly consumers are making this decision. Finally, the paper will explain cord-cutting's market impact, review how cable, DBS, and telephone companies have adapted to the industry changes, and ultimately predict whether or not pay TV can survive the competitive climate.

Evolution of Cord Cutting

Since the late 1930s, television has played an undeniable role in captivating society's attention and interest. From the beginning, watching television was considered a community activity as friends and families joined around a single set to watch the daily news or latest sitcom provided at a specific hour and channel—a concept known as live linear television. With the advent of digital video recorder (DVR) and OTT services, consumers no longer have to wait for a network to decide for them when they could watch, and what type of shows are offered. Now, they are able to view a multitude of content at their own convenience on any Internet-connected device. In order to predict the future of television, it is crucial to understand its past. This portion of the research will break down the progression of television consumption habits and the rise of cord cutting.

The year 2007 is significant because Netflix introduced the concept of streaming content over the Internet. According to The Guardian, 2007 is argued to be the "cornerstone of the cord-cutting revolution" (Zambelli, 2014). Over the next two years, Netflix partnered with electronics companies to stream its content on Xbox 360, Blu-ray players, and set-top boxes. In 2010, Netflix was available on the Apple iPad, iPhone, iTouch, Nintendo Wii, and other devices. Over the years, Netflix has won several Emmy Awards, and expanded its business into original content programming including shows like House of Cards and Orange is the New Black.

Amazon Prime, Hulu, HBO Now, and other services followed their footsteps, establishing over-the-top streaming as a strong alternative to traditional broadcast network television.

Perhaps the first real sign of cord cutting was revealed in 2010, which marked the first year that pay TV operators (made up of cable operators, satellite TV operators, and fiber-based operators) experienced quarterly subscriber declines, also known as subscriber churns. SNL Kagan, a leading media consulting firm, reported the progression of such subscriber losses from 2017 to 2016 (Young et al.; see Figure 1). According to a 2013 Nielsen study, the number of Zero-TV households, homes neither using OTA broadcasts nor subscribed to cable or satellite television service, rose from two million to five million from 2007 to 2013. First-ever customer losses were logged in 2013, and continued to decline through 2014. In 2015, cable, DBS, and telco lost an aggregate 1.1 million subscribers (Lenoir, 2016). That same year, Experian Marketing Services found that 7.3% of U.S. homes are cord cutters, bringing the total to 8.6 million households ("Cross Device Video Analysis," 2015).

Online streaming subscriptions are indeed growing while pay TV subscribers are declining, but it remains unclear whether or not cord cutting is a real threat to MVPDs. In 2010, Glenn Britt, the CEO of Time Warner Cable, said that, "There's no evidence that [watching TV online is] causing [people] to drop their cable or satellite or phone subscriptions other than in very, very small numbers (James, 2010)." This epidemic is important to continue exploring, as television consumption is an inescapable part of modern culture and will shape how generations to come receive entertainment, news, education, culture, and more. In the next section, the paper will discuss the demographics and statistics surrounding cord cutting.

Demographics of Cord Cutters

The demographics portion of this essay will begin with a quote from Kirk Parsons, senior director at the marketing information services company, J.D. Power: "The streaming video customer experience appears to be stratifying across the different subscriber segments, with pay TV service still having a major effect on the overall streaming video experience. Part of the reason is demographics" (Effler, 2016). Next, we will briefly discuss who exactly is cutting the cord, factors that affect whether or not consumers cut the cord, and lastly, discuss the different types of video streamers.

Concentration Among Millennials

In July 2016, GfK's 2016 Ownership and Trend Report reported that 25% of U.S. homes do not subscribe to a pay TV service. (Schwindt, 2016a). About 17% of this quarter relies on broadcast signals while 6% use Internet streaming services. In households that include people ages 18-34, 22% consumers use broadcast signals and 13% use the Internet to receive TV (Schwindt, 2016a). Most research indicates similar data pointing to the conclusion that millennials are more likely to cut the cord as opposed to ages 35 and older. For example, Pew Research Center data indicate that 65% of those ages 18 to 29 have pay TV services at home, compared to 73% of adults ages 30 to 49, and 83% of those ages 50 and older (Horrigan & Duggan, 2015).

The speculation is that after a millennial moves out of his or her family home, he or she would prefer not to spend money on a pricey subscription bill (Steel & Marsh, 2015). Interestingly enough, a 2015 Nielsen study suggests that the decision to cut the cord and rely solely on Internet streaming services will only last until millennials start families. The study separated millennials into three groups: dependent adults living in someone else's home (mostly their parents' home); people on their own (or living in their own home without children); and people starting a family (or living in their own home with children) (Steel & Marsh, 2015).

The study found that pay TV penetration was highest among dependent millennials (88%), lowest among millennials on their own (72%), and higher again among millennials starting a family (79%) ("The State of Traditional TV", 2016). When millennials have kids, they may fall into similar viewing patterns they had while growing up with their parents (see Figure 2). Glenn B. Enoch, senior vice president for audience insights at Nielsen, stated, "We think behaviors could change once the so-called millennials start having families" due to parents' desire for better children-friendly programming (Steel & Marsh, 2015).

Geography

Nielsen reported that those who live in rural areas or small towns are less likely to cord cut and adopt broadband streaming services as an alternative to pay TV. This is due to the fact that digital services may not be optimal in these parts of the country. Those who live in urban areas are more likely to cord cut and adopt streaming services, as premium broadband services tend to be more accessible (Steel & Marsh, 2015).

Income

According to Pew Research Center, cord cutters are more likely to live in lower income households (Horrigan & Duggan, 2015). Strategy Analytics found the typical cord cutter is young, educated, and employed millennial. Compared to their future selves, twenty-something's make less money. Pew Research Center gathered that in homes whose annual incomes are $20,000 or below, 21% have cut the cord, and in households above that income, only 14% have cut the cord (Horrigan & Duggan, 2015).

Cord Nevers

J.D. Power concluded that though the number of cord cutters has increased, a majority of video streamers still subscribe to pay TV in addition to a streaming service. According to their survey, 4% of streaming customers are cord nevers; 13% are cord cutters; 23% are cord shavers; and 60% are cord stackers (Effler, 2016). According to The Diffusion Group, a considerable amount of Generation Y millennials and younger Generation Z consumers identify as cord nevers, which is a term used to describe those who have never subscribed to pay TV ("Streaming Services Have Big Impact," 2016). The Diffusion Group surveyed 999 millennial cord nevers, and found that "around 3 in 4 [said] that being 'fine with subscription services like Netflix or Hulu' was relevant in their decision to forego legacy pay TV." ("Streaming Services Have Big Impact," 2016; see Figure 3) Additionally, of 81% of millennial cord nevers, 9 in 10 feel that these online services are enough to fit their needs. Nielsen found that in Quarter 1 2016, streaming video services became on par with DVR penetration as it reached half of U.S. households ("Streaming Services Have Big Impact," 2016).

Cord Shavers

Cord shaving occurs when consumers reduce their pay TV packages to save money and add over-the-top video subscriptions to their viewing cycles (Perlberg, 2014). Cord shaving is seen in older segments like the 35-49-year-old Generation X, along with the 50 years-and-older Baby Boomers. Cord shavers sign up for cheaper, "skinny" cable bundles that may not include cable channels like TNT, USA, or ESPN. These consumers intend to only pay for the channels they consume, as opposed to paying for a typical expensive cable package that may include channels they are uninterested in. For example, a cord shaver may subscribe to a $10-50 "skinny" cable bundle, and separately pay for an $8.99 Netflix subscription to satisfy their viewing needs (Perlberg, 2014).

Cord Stackers

A cord stacker is a customer that subscribes to both a traditional pay TV service as well as a streaming video service (Lafayette, 2016). This customer “stacks” one service on top of the other. Though cord stacking is the most expensive option as a viewer, cord stackers have the most viewing options. According to a survey by J.D. Power, cord stackers are the most satisfied customers compared to cord cutters, cord nevers, and cord shavers (Lafayette, 2016). J.D. Power conducted a survey that measured the level of satisfaction among video streaming costumers. Cord stackers scored at an 826 out of 1000, cord shavers scored an 822, cord nevers scored an 807, and cord cutters scored an 802. According to these data, satisfaction is higher among viewers who do subscribe to traditional pay TV compared with those who do not. Perhaps these data suggest a positive forecast for the future of pay TV’s relevance; however, this topic will be explored in a later portion of this research (Effler, 2016).

Reasons Why Consumers Cut the Cord

This section will investigate what exactly motivates consumers to cut the cord. According to Ooyala, an Internet video company founded in 2007, there are three key reasons behind dropping an MVPD and adopting alternatives: the opportunity for viewing alternatives, the shift in viewing behaviors, and the evolution of marketplace factors (“State of the Broadcast Industry,” 2016).

Opportunity for Viewing Alternatives

The U.S. media and entertainment industry currently offers an overabundance of choices for viewing platforms, increased mobility of consumption, flexibility and convenience, and opportunity for content substitutes. Consumers can decide among a range of devices to receive content from. Experian reports that television is still the king of video, estimating that over 80%

of U.S. adults still watch live programming content on a TV every week (“Cross Device Video Analysis,” 2015). However, consumers are no longer restricted to consumption from traditional television; they can view from smart phones, tablets, laptops, smart-TVs, Apple TV, Roku etc. Device owners are exceedingly more likely to cut the cord compared to non-device owners. Households are 24% more likely to cord cut if at least one resident owns a smart phone, 28% more likely if a resident owns an iPhone, and 15% more likely if a resident owns any tablet, and over 21% more likely if a resident owns an iPad (“Cross Device Video Analysis,” 2015; see Figure 4). Data suggest 68% of Americans use Internet TVs to connect their televisions to the Internet, 20% use video game consoles, 16% use DVD/Blu-Ray players, 13% use Roku, 9% use Apple TV, and 5% use Google Chromecast (“Cross Device Video Analysis,” 2015; see Figure 5).

As stated above, consumers were once limited to watching something at a fixed time, channel, and place. Now, there is increased mobility to receive content out of the TV room and out of the home. Millennials spend one-third of their time consuming content using connected devices like laptops and mobile devices (“State of the Broadcast Industry,” 2016). A society and generation built upon convenience would prefer to have control over their viewing experiences and consume content according to their own schedule. For younger generations and cord nevers, free content alternatives like YouTube are more attractive than cable subscriptions. Additionally, original programming on Netflix, Hulu Plus, and Amazon Prime offers exclusive, top-rated content; for example, Netflix won Emmy Awards for *House of Cards* and *Orange is the New Black;* the success of these shows may provide incentive for pay TV to cord cut and subscribe to Netflix.

Shift in Viewing Behaviors

Ad sensitive consumers are more attracted to and tolerant of online streaming as opposed to traditional pay TV (“State of the Broadcast Industry,” 2016). As streaming video has become more prevalent, the typical advertising model has taken a more targeted and personalized approach. If consumers are exposed to ads that are related to their interests, they are ultimately provided with a more enjoyable viewing experience. Hulu, for example, implemented this concept and designed a feature called AdSwap. The feature “puts complete control in the hands of the user by enabling them to instantly swap out of an ad they are watching for one that is more relevant” (“Hulu AdSwap,” 2016). Google’s “Ads Preferences Manager” provides a similar customization option.

Just as consumers are more tolerant of personalized ads, they are also increasingly drawn to receiving personalized content. Most OTT streaming platforms tailor to customer desires and preferences by providing content recommendations. This digital technology facilitates the consumer’s decision-making process, and exposes the consumer to new programming—that of which has potential to become his or her favorite show. Personalized content creates a more positive and interactive viewing experience for the consumer.

The desire to “binge watch” has become a very popular viewing behavior and pastime among Americans. A consumer will binge watch by catching up on multiple episodes or seasons of a TV series in one sitting, typically through use of digital streaming. About 27% of American consumers binge weekly, and about 49% of them binge at least monthly. This behavior, another driving factor behind cord cutting, is particularly common among millennials (“State of the Broadcast Industry,” 2016).

Avid interest in live quality sports content is often viewed as ultimate deterrent for potential cord cutters, as they would prefer to watch from a traditional television. However, for perhaps more casual sports fans, OTT platforms have begun to offer a live sports experience. According to *Time Magazine*, TNT Overtime has an NBA TNT Overtime app, which allows consumers to stream select playoff games (Tuttle, 2016). The basic Sling TV package also includes ESPN, ESPN 2, TBS, and TNT. Their new beta service package also offers Fox Sports channels, which may air NHL, NBA, MLB, and NFL games. Playstation Vue streams two ESPN and Fox Sports channels, in addition to TBS and TNT. Yahoo has streamed one MLB game daily during the 2016 season. Even Netflix is open to stream live sports, only on the condition that they can own and create the content themselves (Tuttle, 2016). According to *Forbes*, Disney bought stake in the MLB’S streaming company BAMTech in hopes to collaborate with ESPN and launch a multi-sport subscription streaming service of its own (Brown, 2016). SNL Kagan would consider this a “giant leap in the history of sports programming” (“Broadband Cable Financial,” 2016).

Evolution of Marketplace Factors

A survey from Salesforce found that 56% of U.S. Internet users cut the cord because pay TV services are too expensive (“Why are Internet Users Cutting the Cord,” 2016). Additionally, 32% users cut the cord due to pay TV’s technical issues, and 23% cut the cord due to pay TV’s poor customer service (see Figure 6). The average pay TV subscriber currently pays over $100 according to Leichtman Research’s annual study (Lovely, 2016; see Figure 7). Over the past five years, these prices have risen by 40%. As previously discussed, millennials make up a majority of cord cutters. Their low incomes make them less likely to subscribe to an overpriced pay TV bill. Additionally, millennials tend to spend more money on devices like smart phones, tablets, and laptops, leaving them less disposable income to spend on video content. These consumers are more inclined to spend the least amount of money on a platform that offers an abundance of content (“State of the Broadcast Industry,” 2016).

According to a study from cg42, a New York-based research and analysis firm, a cord haver spends about $187 a month before cutting the cord; this fee includes streaming services, broadband Internet, TV, and phone (Ramachandran, 2016). In contrast, cord-cutter spends only $83 on streaming an Internet, and a cord-never spends about $71. Steve Beck, managing partner at cg42, said that, “The consumer is discovering they don’t need the mean, evil cable company to get the content that they want, and they can get it for a better deal” (Ramachandran, 2016). *The Verge*, a news and media network operated by Vox Media, offers an online guide that helps consumers determine whether they can cut the cord and still receive the content they want, and even determines how much it would cost for them to do so. Amazon Video is about $8.25 a month, CBS All Access is $6 a month, HBO Now is $14.99 a month, Hulu Plus is $7.99 a month, Netflix is $8.99 a month, Playstation Vue is $49.99 a month, Sling TV is $20 a month, and Showtime is $10.99 a month (“The Cord Cutter,” 2016). All of these options that carry an abundance of programming are considerably less money than a traditional monthly pay TV subscription.

There has been a rapid growth of broadband penetration rates to keep up with the emerging over-the-top streaming market. SNL Kagan claims U.S. cable broadband subs will increase by over 8 million in the next 10 years, reaching 71 million by 2026 (Spangler, 2016). If this prediction holds true, the cable company’s revenue will increase from $35.5 billion to $47.3 billion. *Variety* reports that broadband is far more profitable for TV, so even if the amount of cord cutters increase, cable companies may not be affected if they are also charging for high speed internet (Spangler, 2016). This speculation will lead into next portion of this paper, which will further consider the market impact and implications of cord cutting.

Discussion

As discussed throughout this paper, the trend in cord cutting is gaining traction, and pay TV subscribers are dwindling. The final portion of this paper will examine pay TV's subscriber churn, how pay TV operators have attempted to adapt to the marketplace, and finally, explore potential predictions for the future. SNL Kagan's Multichannel Market Industry Presentation reported the combined cable, DBS, and telco video subscriptions declined 812,000 in Q2 2016, surpassing the record drop from Q2 2015 (Kane, 2016). Most recently, on November 11, 2016, *Variety* reported that the pay TV industry lost 486,000 subscribers in Q3 2016 (Schwindt, 2016b). BTIG Research analyst Rich Greenfield stated that within the first nine months of 2016, the eight biggest providers lost 926,000 subscribers total. These findings indicated cord cutting's impact on the industry. The article reports, "the second and third quarters are typically down times for the industry…The problem is that these second and third quarter losses have been larger than usual over the last two years, and that the corresponding boom quarters—the first and fourth—haven't made up for those losses like they did through as recently as 2012" (Schwindt, 2016b).

Some analysts deny the impending demise of pay TV, in part because cable, DBS, and telephone companies have attempted to keep up with the rapidly evolving video consumption landscape (Aggarwal et al., 2016). These pay TV companies have begun to shift customers to lower priced "skinny bundles" to offer a more flexible, economical option to prevent losing them completely. These consumers, or as noted earlier in the paper, "cord shavers," have adopted skinny bundles faster than the networks have anticipated. (Aggarwal et al., 2016) For example, Comcast's XFINITY, Dish's Flex Pack, and Verizon's "Custom TV" packages all offer skinny bundle options. The implementation of skinny bundles has created some friction between pay TV operators and cable networks because these bundles typically exclude the most expensive networks. Such high priced networks like ESPN ultimately experience a contraction in subscriber base (Robson, 2016).

Grappling with how to stay relevant, pay TV providers have even begun to compete in the streaming video market ("Broadband Cable Financial," 2016). Comcast launched a TV Everywhere initiative in 2009 with the intention of growing the number of devices where consumers can receive content. Pay TV providers began providing OTT services, considered "virtual MVPDs," which offer live, linear channels that serve the digital, millennial market segment. For example, Dish's Sling TV is a streaming-based skinny package that was discussed earlier in the paper. Comcast introduced its XFinity TV app, Charter introduced its Spectrum TV app, and Cablevision introduced its Optimum app. AT&T's DirecTV Now will launch by the end of 2016. Virtual MVPDs offer a real competition to established OTT services. According SNL Kagan, UBS analyst Doug Mitchelson recently predicted that virtual MVPDs like Sling and DirecTV "will attract 15 million subscribers by 2020, equating to 15% of the multichannel subscription market. By 2025, he believes these services could surpass 25 million subscribers" (James, 2016).

It is important to note that only Pay TV providers with robust broadband capability are in the best position to compete in the evolving digital market. The larger pay TV corporations like Comcast, Time Warner Cable, Dish, DirecTV, Verizon Fios, AT&T U-Verse, and more sell the broadband services that bring in cash flow from cord cutters and streamers. The smaller pay TV distributors without access to broadband are highly susceptible to cord cutting and more likely to experience margin erosion at a faster rate. Unless these endangered companies align with broadband players, they will struggle to survive (Aggarwal et al., 2016).

This research concludes that the effects of cord cutting on the future of pay TV will vary for cable, DBS, and telephone companies, as they are not experiencing subscriber churn and revenue losses at the same rates. SNL Kagan published projections for multichannel subscribers and revenues from 2015 through 2020 (Cheen, 2016). Contributing to about 14.3% of total pay TV revenue in 2015, telco providers are suffering the most subscriber and revenue declines. U-verse is expected to be phased out by the near term, and Verizon is not quite on track with expanding its FiOS fiber build. By 2020, telcos’ contribution is projected to decline to 10.2% of total pay TV revenue (Cheen, 2016).

Cable companies are suffering the least from subscriber and revenue declines. Specifically, Comcast and Charter communications have even received a boost from broadband success. Cable companies contributed to 50% of total pay TV revenue in 2015, but by 2020, it may slip to 48.4%. According to *Fortune*, Comcast does not feel threatened by the effects of cord cutting (Ingram, 2016).

SNL Kagan blogger, Bishop Cheen, suggests DBS is the “big winner” (Cheen, 2016). DirecTV will gain from AT&T U-verse’s loss, and Dish will yield high growth from its Sling TV initiative. DBS, which estimated 36.6% of industry revenue in 2015, is projected to increase both its subscribers and total annual revenue by 2020, eventually contributing for 41.5% of total pay TV revenue. Clearly, cable and DBS operators certainly have a major advantage over telcos (Cheen, 2016).

Overall, results found that by 2020, total pay TV subscribers are projected to decline by 1.1% compound annual growth rate (CAGR), and average revenue per unit may increase about

1.5% CAGR (Cheen, 2016; see Figure 8). These numbers suggest that, though a slow and steady decline does exist, a large part of the pay TV's industry subscriber base is, and will remain, in tact. Analyst Brian Wieser of Pivotal Research Group further reinforced this conclusion. His said that, "any expectations around the 'death of TV' because of SVOD services are likely overstated" (Lafayette, 2017). The major pay TV contributors will continue to reinvent themselves to keep up with industry-wide change—a revolution inspired by Netflix in 2007. Lachlan Murdoch, executive chairman of Fox, stated that, "This is a time of transformative change in our industry. It's the kind of change that demands equal measures of clear thinking and of calculated risk-taking" (Lafayette, 2015).

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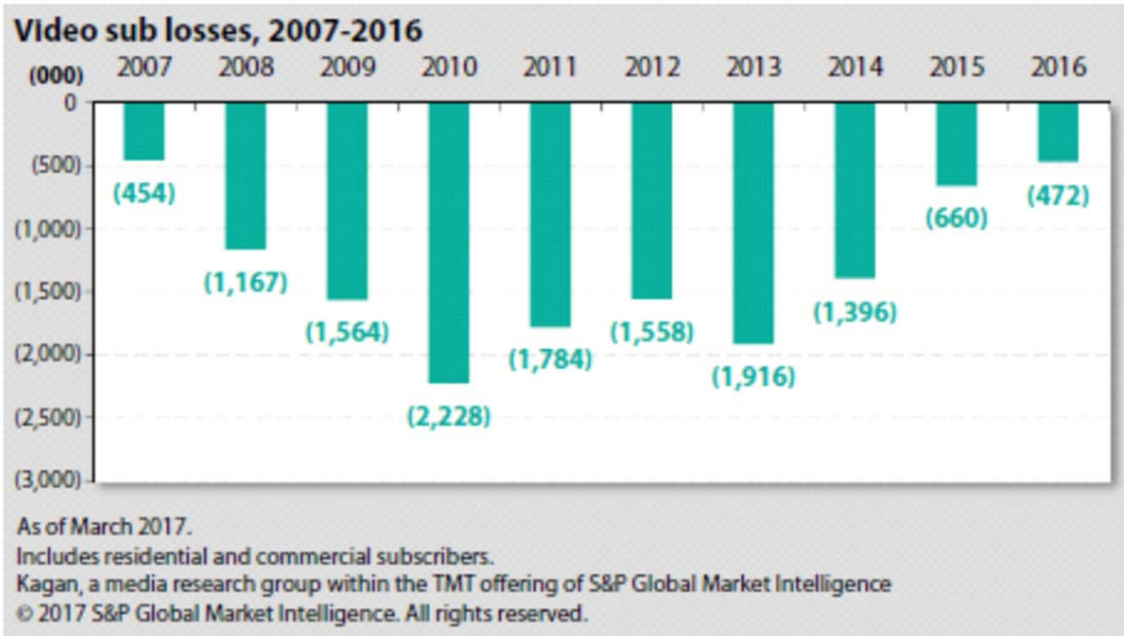
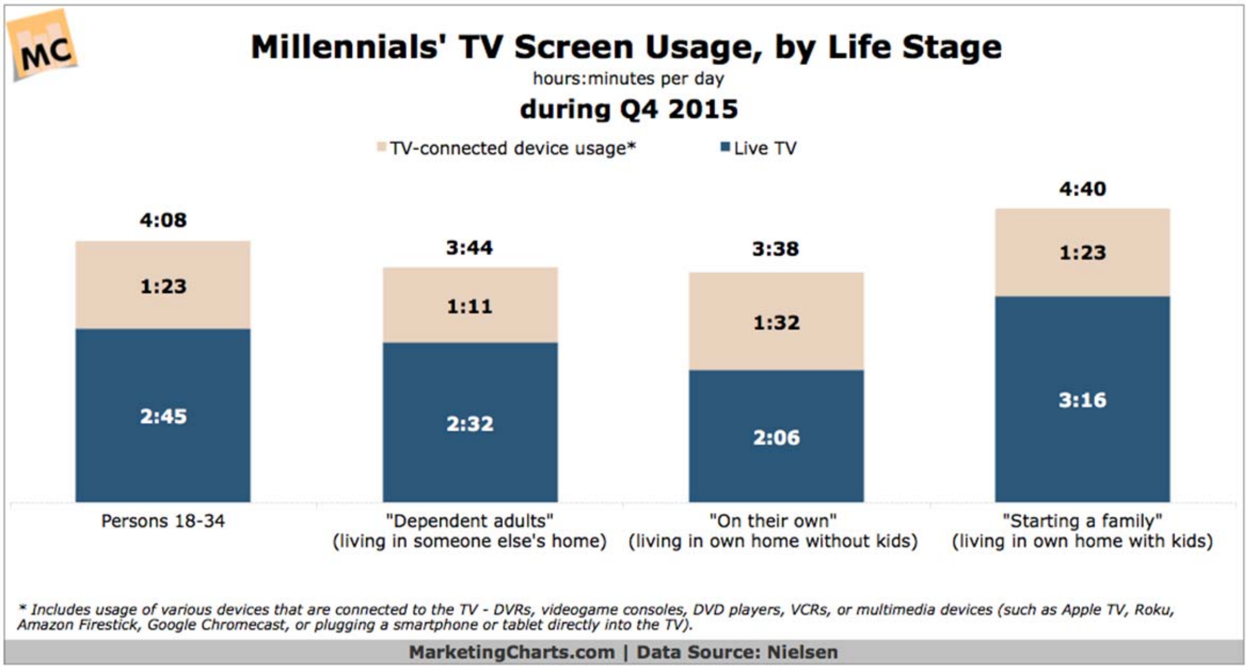
Appendix

Figure 1.



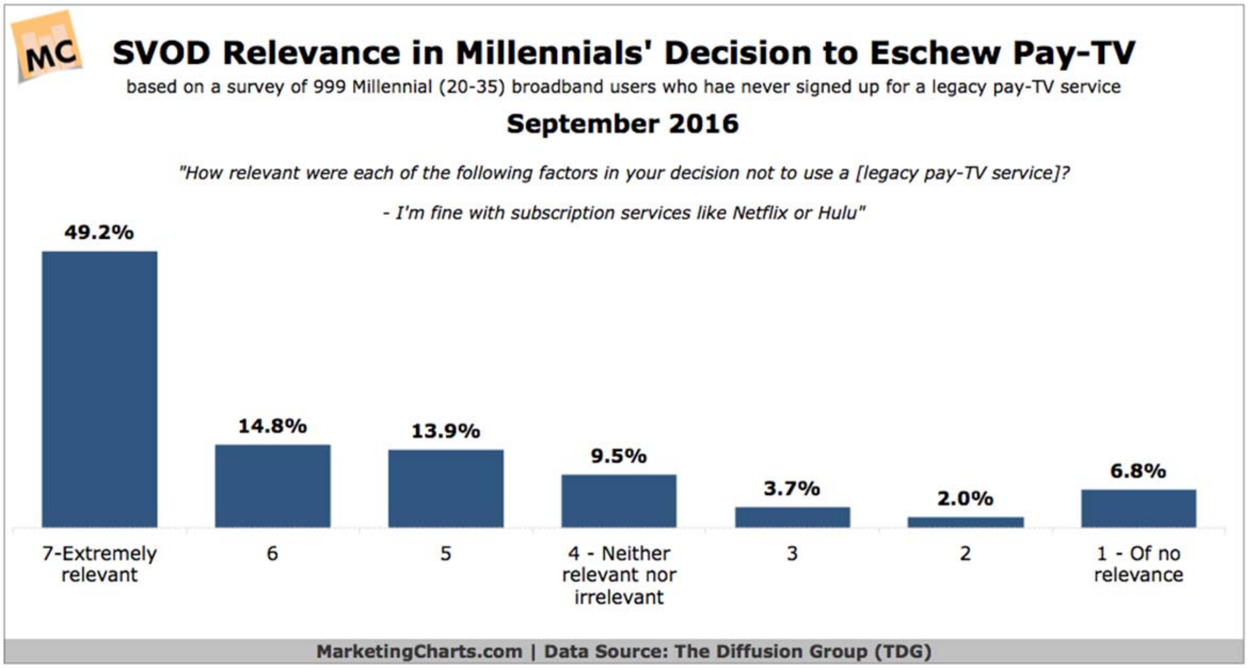
Source: Young et. Al (2017).

Figure 2.



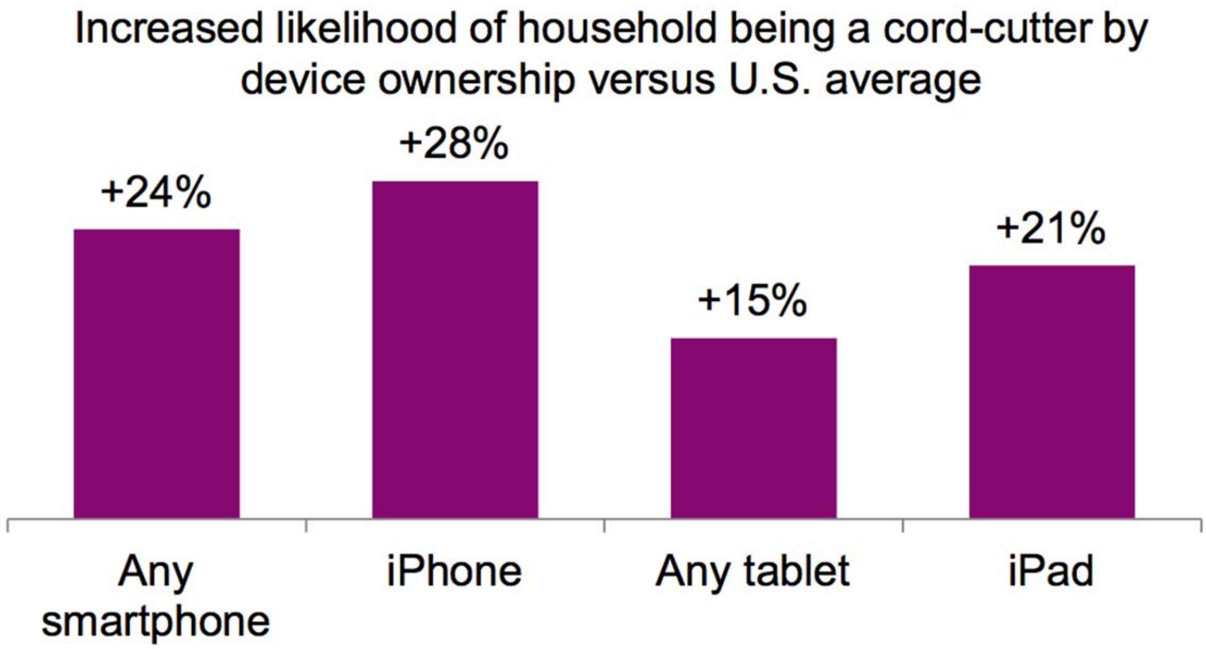
Source: "The State of Traditional TV" (2016).

Figure 3.



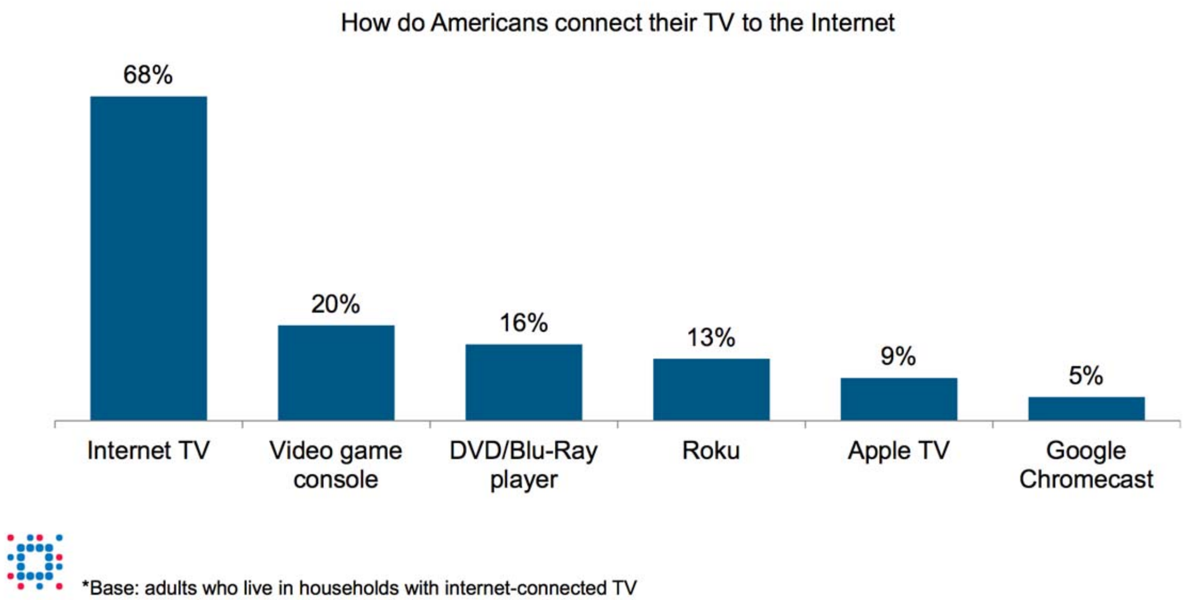
Source: “Streaming Services Have Big Impact” (2016).

Figure 4.



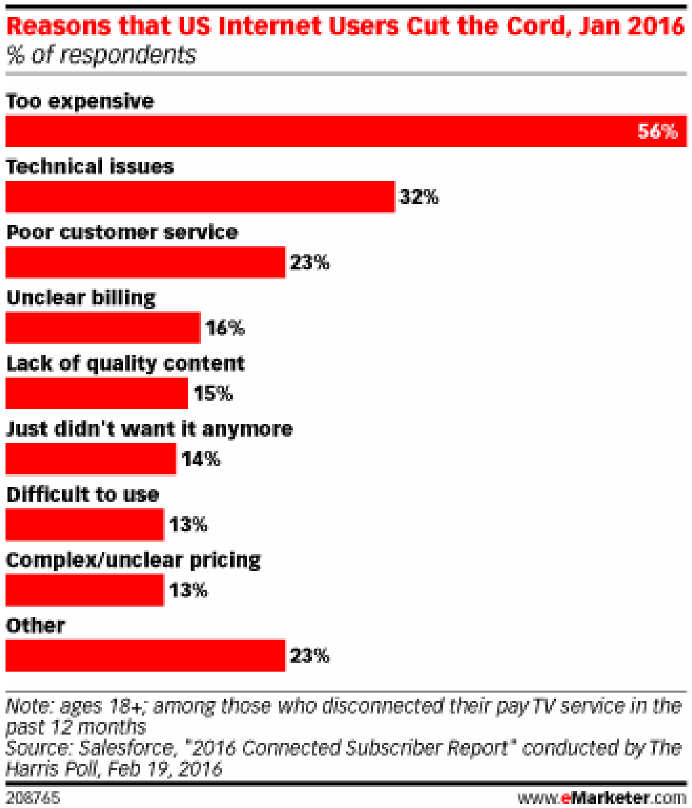
Source: “Cross Device Video Analysis” (2015).

Figure 5.



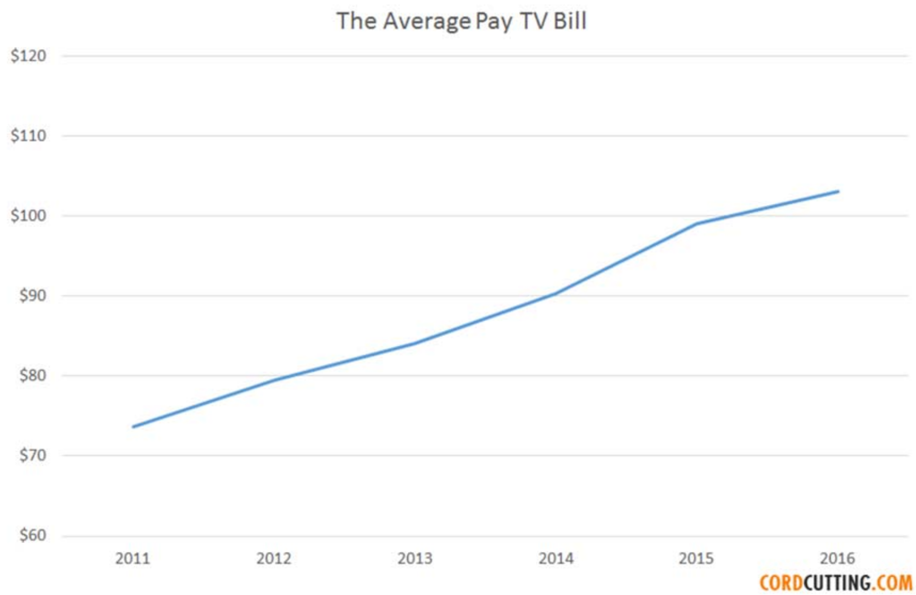
Source: “Cross Device Video Analysis” (2015).

Figure 6.



Source: "Why are Internet Users Cutting the Cord" (2016).

Figure 7.



Source: Lovely (2016).

Figure 8.

Multichannel pay TV projections 2015-2020

Provider		2015	2016	2017	2018	2019	2020	CAGR[3]
Cable:								
Average subs	(M)	53.5	53.0	52.3	51.7	51.0	50.3	-1.2%
Monthly ARPU	($)	89.57	90.84	91.71	92.51	93.11	93.62	0.9%
Annual ARPU	($)	1,075	1,090	1,101	1,110	1,117	1,123	0.9%
Annual revenue[1]	($M)	57,528	57,729	57,606	57,340	56,942	56,475	-0.4%
Change:								
Subs	%	NR	(1.1)	(1.2)	(1.3)	(1.3)	(1.4)	NR
ARPU	%	NR	1.4	1.0	0.9	0.6	0.6	NR
Revenue	%	NR	0.3	(0.2)	(0.5)	(0.7)	(0.8)	NR
DBS:								
Average subs	(M)	33.4	33.6	34.5	35.5	35.9	35.8	1.4%
Monthly ARPU	($)	102.60	104.83	107.06	109.11	110.89	112.73	1.9%
Annual ARPU	($)	1,231	1,258	1,285	1,309	1,331	1,353	1.9%
Annual revenue[1]	($M)	41,102	42,229	44,310	46,416	47,755	48,418	3.3%
Change:								
Subs	%	NR	0.6	2.7	2.8	1.2	(0.3)	NR
ARPU	%	NR	2.2	2.1	1.9	1.6	1.7	NR
Revenue	%	NR	2.7	4.9	4.8	2.9	1.4	NR
Telco:								
Average subs	(M)	13.0	12.4	11.3	10.4	9.5	8.7	-7.9%
Monthly ARPU	($)	105.29	107.80	110.35	111.88	113.32	114.57	1.7%
Annual ARPU	($)	1,263	1,294	1,324	1,343	1,360	1,375	1.7%
Annual revenue[1]	($M)	16,476	16,008	14,966	14,020	12,975	11,901	-6.3%
Change:								
Subs	%	NR	(5.1)	(8.7)	(7.6)	(8.6)	(9.3)	NR
ARPU	%	NR	2.4	2.4	1.4	1.3	1.1	NR
Revenue	%	NR	(2.8)	(6.5)	(6.3)	(7.5)	(8.3)	NR
Total:								
Average subs	(M)	99.9	98.9	98.1	97.5	96.4	94.7	-1.1%
Avg. ARPU[2]	($)	96.47	98.28	99.92	101.36	102.55	103.68	1.5%
Annual ARPU[2]	($)	1,158	1,179	1,199	1,216	1,231	1,244	1.5%
Annual revenue[1]	($M)	115,106	115,966	116,882	117,777	117,672	116,794	0.3%
Change:								
Subs	%	NR	(1.0)	(0.8)	(0.6)	(1.2)	(1.7)	NR
ARPU	%	NR	1.9	1.7	1.4	1.2	1.1	NR
Revenue	%	NR	0.7	0.8	0.8	(0.1)	(0.7)	NR

[1] Video revenue includes basic, premium, video on demand, and video gaming. Projections do not include ad revenue, high speed data and telephony.
[2] Total average ARPU is weighted by revenue contribution from the three provider categories.
[3] Compounded annual growth 2015 through 2020.
NR = not relevant
Source: SNL Kagan. Table and analysis by Bishop Cheen for SNL Kagan, October 2016.

Source: Cheen (2016).