

# BROADCAST TO BROADBAND

<sup>1</sup>Manya Jain, <sup>2</sup>Teena K Bhatia

<sup>1</sup>Assistant Professor, <sup>2</sup>Assistant Professor

<sup>1</sup>Management and Commerce,

<sup>1</sup>Delhi School of Professional Studies and Research affiliated to GGSIPU, New Delhi, India

**Abstract:** Video Streaming and online internet services have been helping viewers all over the world, download and watch large video files from the comfort of their homes. Also, broadband-based television ecosystem has increased with the introduction of 4K Ultra High Definition (UHD) options. All the streaming services do not provide the 4K streaming services, but the major ones – including Netflix, Stan, YouTube, and Amazon Prime Video – all now offer the option for streaming UHD videos. This paper ventures to explain the impact that video streaming technology and how the video streaming services have made a negative impact on the traditional TV Viewership in today's world. This paper overall describes the major factors that is mobilizing current generation from TV viewing to broadband-based ecosystem.

**Index Terms – Video Streaming, Broadbandbased Eco System, Traditional TV viewership.**

## INTRODUCTION

Television is an ecosystem for transferring various multimedia files which helps in projecting it on screens. This technology is being since its invention in 1927 to broadcast programs not only for entertainment but also disseminating information, and education all over the world catering to viewers of all age groups. The television set has become a commonplace in many households, businesses, and institutions. Few inventions only have had such a massive impact worldwide majorly covering American society. Jeff Greenfield, a media observer, stated “Television is the pervasive American pass time cutting through geographic, ethnic class and cultural diversity, it is the single binding thread of this country, the one experience that touches young and old, rich and poor, learned and illiterate” (Biagi, 2005). TV's evolution has seen a lot of phases where in 1948 where 1% of households in America had access to TV set, by 1953 this percentage had increased to upwards of 50%. Not only this but in the early 1960's this statistic had jumped to 90% (Campbell, Martin, & Fabos, 2012). This paper aims to study the shift from traditional television to broadband based ecosystem.

With the passage of time, people are more engrossed into their work life and get less time to sit in front of the Television systems. Hence there has been a rapid emergence of new technologies to provide comfort, convenience and portability for the On-The-Go Generation. So the people are shifting to online streaming at a fast pace thereby losing most of the TV fans. The Internet has not only harbingered an innovative way of content viewing but has also changed the way we save media files. With major players of the industry such as Apple and Amazon entering the market with products like Apple TV, Amazon fire stick, there is a big push towards online media streaming. There are many other platforms available which provides better services to the viewers such as Video on Demand, which gives us access to recent films and movies anytime, anywhere. Companies like Netflix, Hulu, Amazon Video, provide services that allows the users to stream TV shows and movies online through an electronic devices, and make access to the latest shows and movies easy, with just a nominal monthly subscription. It has become a cheaper alternative than getting cable or satellite TV.

## OBJECTIVES OF THE STUDY

- To analyze the shift from Traditional Television industry to modern TV viewing systems in the U.S.
- To find the major factors mobilizing current generation from TV viewing to broadband-based ecosystem.

## RESEARCH METHODOLOGY

The following paper is descriptive in nature. A descriptive research is used to describe characteristics of a population or phenomenon being studied, basically it attempts to describe “What” of a research statement. It does not answer questions about how/when/why the characteristics occurred. The data has been gathered from secondary sources like websites, news articles etc.

## LITERATURE REVIEW

According to *Mitch Berman*, CEO of on-demand video service *ZillionTV*, his description of an ideal world of TV would be “Unlimited video-on-demand, perfectly personalized to the consumer taste, and with advertisers able to push ads precisely to align with that taste.

*Nick Bilton*, a writer for *The New York Times* discusses his experience in cancelling his cable service and moving to “cable freedom.” He used a mini laptop with a video card can handle streaming video requirements. With the use of a wireless mouse and

keyboard, his television essentially became his new computer monitor. He also used his Xbox 30 to download Netflix, and installed a Hulu desktop application to ease his transition.

“Both British and German regulations try to restrict the scope of the online services by referring back to the traditional format of broadcasting. Through these limitations, new media platforms are not regarded independently, but as something supporting and additional, useful to fulfill existing obligations” (Moe, pp. 235, 2008).

Although supplementary content and user interactivity is also used in the United States for television shows, the Internet is not restricted specifically to that type of content. “As training wheels for the coming era of interactivity, many television shows have created official web sites, and some incorporate the comments of online fans who are encouraged to e-mail comments and requests while they watch” (Andrejevic, pp. 24, 2008).

Online communication helps to facilitate distribution of new forms of television, and it also serves as an additional channel – both literally and figuratively (Moe, 2008).

The reason for the popularity of this hand-held technology is due to the strongly personalized usage, and because it provides a one-on-one connection between the user and the supplier of information (Beyer et al., pp. 215, 2007).

A study by Liebowitz and Zentner (2012) employs observational panel data to examine the impact of broadband penetration on television programming viewing time. More specifically, the authors use data on TV viewing time in conjunction with data on Internet use, education, and income to measure the effects for various age categories of television viewers. Their main results indicate that the relationship between broadband penetration and TV viewing time differs for younger and older populations. The relationship is not statistically significant for individuals over 35 years old, but it is negative for younger individuals. The coefficients on income are positive and statistically significant, but very small in magnitude. At the same time, education is not associated with a statistically significant impact on viewership.

In general, to explain the demand for media services, researchers rely on standard microeconomic demand theory, in which the quantity demanded is a function of price, household income, various measures of “quality” of the service, availability of substitutes, and variables representing consumer tastes [Hothi and Bodkin (1980); Park (1972)]

The diffusion of innovations theory is widely used to explain the adoption of a new media technology. Diffusion of innovations theory suggests that consumers experience persuasion due to perceived characteristics of an innovation through various communication channels; these perceived characteristics are important factors that affect the adoption of the innovation. Characteristics of an innovation are relative advantage, complexity, compatibility, observability, and trialability (Rogers, 1995).

### ANALYSIS & INTERPRETATION

The long-prognosticated demise of TV may be starting before our eyes—but at a slow pace. Earlier television was the centre of attention in every household but now individuals are spending more and more time surfing web and viewing streaming services. A large number of households are choosing to dump TV altogether.

A large number of alternatives have cropped up in the past few years giving the traditional television a tough competition to allure the viewers. Some of the major competitors are – Amazon Prime, Hulu, Netflix. These competitors are streaming giants, which provide their customers with Video-On-Demand services for a monthly or an yearly subscription. Most of the online streaming services like Amazon Prime, Netflix as well as Hulu are US based firms making the United States the most penetrative market. Hence this analysis is based on the U.S. market. A lot of households now have multitudes of multimedia devices like an Apple TV, smart TVs which provides the services of Apps like Netflix.

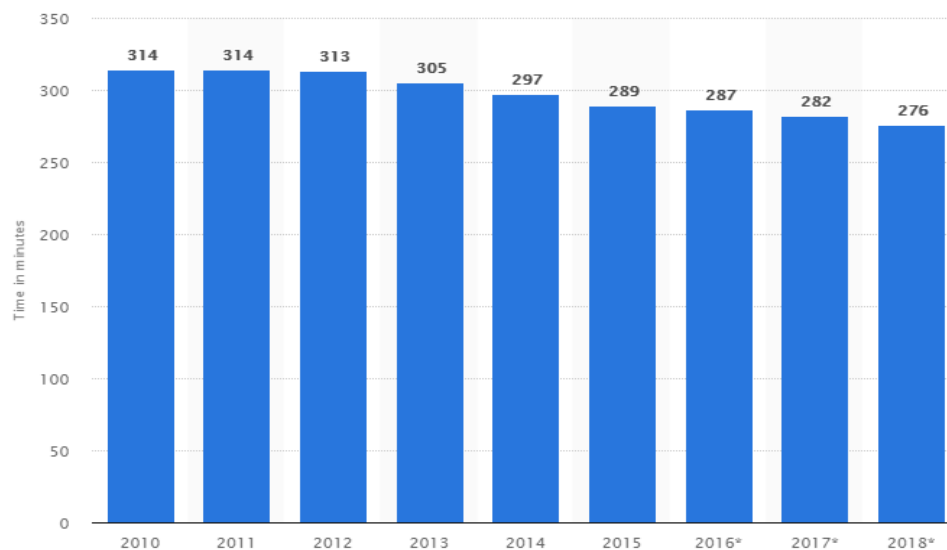


Figure 1 : Daily TV viewing time of U.S. viewers from 2010-2016

The above graph shows daily TV viewing time of U.S. viewers from 2010-2016 and provides period of forecast from 2017 to 2018. According to the graph, on an average, a U.S. viewer spent approximately 287 minutes(4 hours 47 min)in front of the T.V. on daily basis in 2016.As new technologies came into the picture, the very existence and importance of traditional television started fading out. Now the viewers turn to internet connected technologies for entertainment. In the forecasting year 2017 and 2018 the number of hours viewers spent in watching traditional TV started to decline and dropped to almost 3.6 hours.

This major decline in traditional TV owed to the emergence of high speed internet services which was like a blessing in disguise for the broadband based service platform like Netflix, Amazon Prime, Hulu etc.

**Number of viewers who visited NETFLIX in the United States from 2014 to 2017 (in millions).**

Table 1 : Total number & percent of people visiting Netflix from 2014-2017

Season	Base total population (18 years & above)	Number of people using Netflix	Percentage of people using Netflix
autumn 2014	242.98 million	57.31 million	23.6
spring 2015	244.19 million	63.22 million	25.9
autumn 2015	245.40 million	70.99 million	28.9
spring 2016	246.84 million	78.49 million	31.8
autumn 2016	248.28 million	84.08 million	33.9
spring 2017	249.64 million	84.88 million	34

This table 1 shows that there has been an increase in the percentage of people from 23.6% in 2014 to 34% in 2017 that have opted Netflix as a source of entertainment

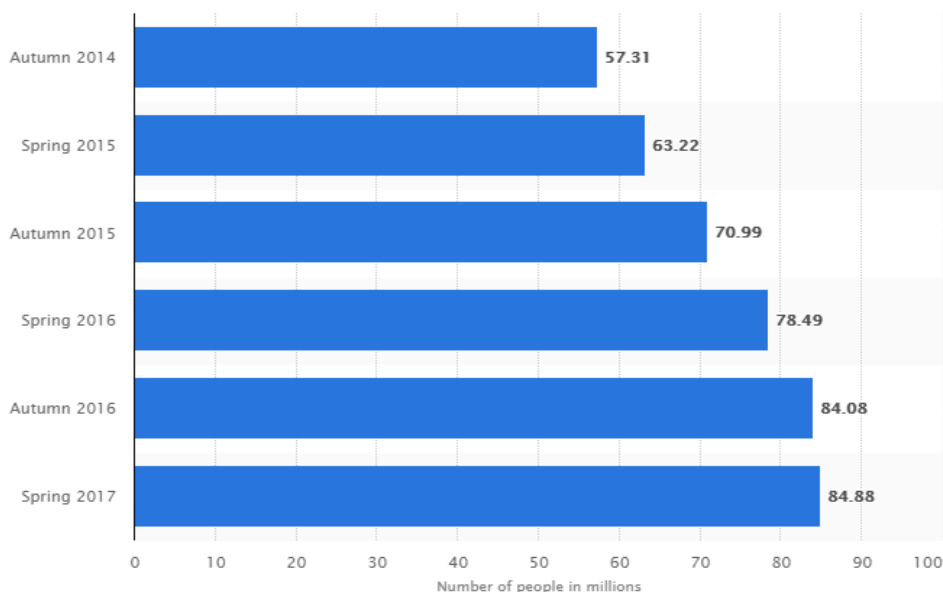


Figure 2 : Total number of people visiting Netflix from 2014-2017

Figure 2 illustrates that 85 million people of U.S. in the year 2017, have been active members as well as subscribers to the video on demand service of Netflix, up from 57 million in 2014.

**Number of viewers who visited Amazon Prime in the United States from 2014 to 2017 (in millions).**

Table 2: Total number & percent of people visiting Amazon Prime from 2014-2017

Season	Base total population(18 years & above)	Number of people using Amazon Prime	Percentage of people using Amazon prime
autumn 2014	242.98 million	82.68	34
spring 2015	244.19 million	90	36.9
autumn 2015	245.40 million	95.75	39
spring 2016	246.84 million	100.56	40.7
autumn 2016	248.28 million	105.88	42.6
spring 2017	249.64 million	109.59	43.9

Table 2 shows that there has been an increase in the percentage of people from 34% in 2014 to 43.9% in 2017 that have opted for Amazon Prime services as a source of entertainment.

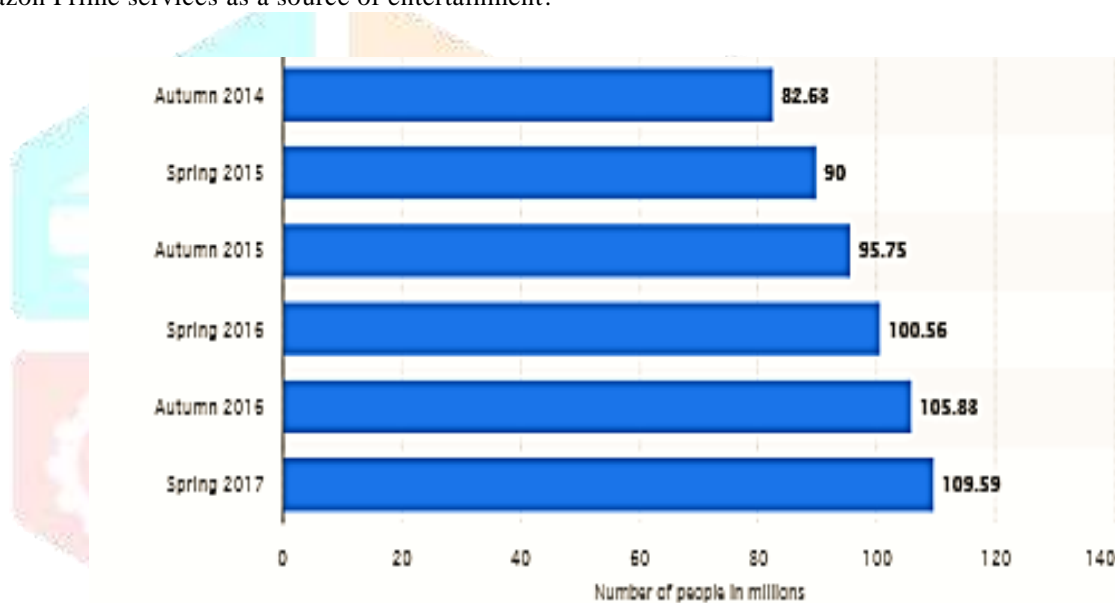


Figure 3 : Total number of people visiting Amazon Prime from 2014-2017

Figure 3 illustrates that there has been an increase in the number of people using Amazon prime from 82.68 million in 2014 to 109.59 million in 2017.

**Number of viewers who visited Hulu in the United States from 2014 to 2017 (in millions).**

Table 3: Total number & percent of people visiting Hulu from 2014-2017

Season	Base total population (18 years & above)	Number of people using Hulu	Percentage of people using Hulu
autumn 2014	242.98 million	13.81 million	5.7
spring 2015	244.19 million	15.95 million	6.6
autumn 2015	245.40 million	18.86 million	7.4
spring 2016	246.84 million	21.21 million	8.6
autumn 2016	248.28 million	22.87 million	9.2
spring 2017	249.64 million	22.73 million	9.1

Table 3 shows that there has been an increase in the percentage of people from 5.7% in 2014 to 9.1% in 2017 that have opted for Hulu as a source of entertainment

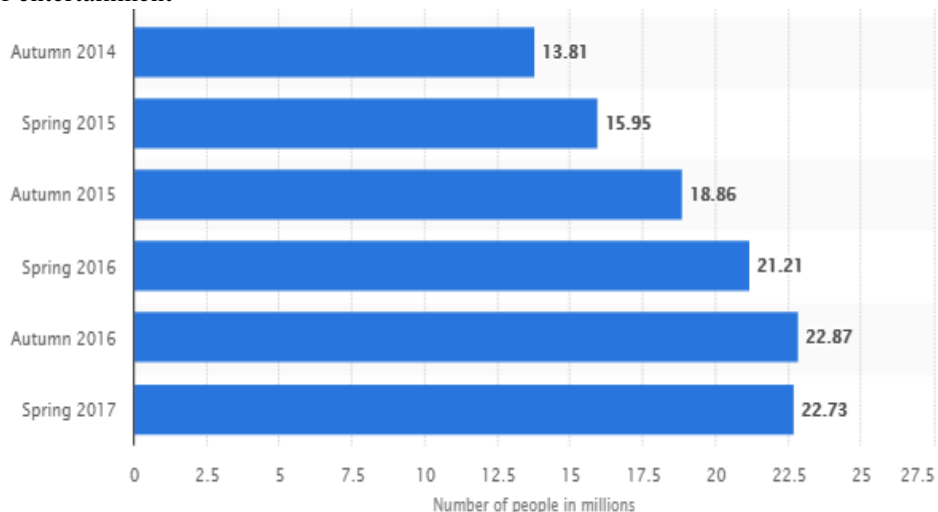


Figure 4 : Total number of people visiting Hulu from 2014-2017

Figure 4 illustrates that there has been an increase in the number of people using Hulu from 13.81 million in 2014 to 22.73 million in 2017. It is quite evident from the data presented above that services like Netflix, amazon Prime and Hulu have been siphoning off viewers from TV for years while. There are certain factors leading to this shift from Traditional T.V. to broadband based services. Following are the factors:-

#### 1. Flexibility

Subscriptions of these online streaming services are very flexible. One can sign up or cancel the membership or subscription anytime whereas cable companies lock you into strict annual contracts.

#### 2. Affordability

The broadband based services are more economical than the big cable providers. Cost wise access to on-demand movies and TV shows over the internet is just a small percentage of what you would pay to your cable TV provider. For example, one can sign up for Hulu Plus or Netflix for less than \$10 per month.

**3. Customization:** With the help of these streaming services, one can subscribe to their favourite shows, and the service will give you a notification about the new episodes whenever they are posted. They also recommend movies and TV shows according to our likes based on the viewing history.

**4. Connectivity:** It is quite easy as it only requires a high-speed broadband internet connection and a PC or mobile device.

**5. Variety:** A wide variety of television shows and movies are made available by Video On Demand service providers that let you access hundreds and thousands of different types of movies and shows that include news, sports, classic TV, entire TV series and movies from different decades.

**6. Devices:** Not only flexibility but it also provides the convenience of watching videos from anywhere, at any time and however many times. Today's generation wants T.V On-The-Go which is made possible due to these broadband based services. Greater and faster access to broadband will further shift the trend towards streaming content online rather than waiting for the scheduled time and watching it on TV. Viewers have better flexibility and are now able to download or stream episodes anywhere, anytime and however many times. All thanks to the way streaming services are structured.

#### 7. Connectivity is cheaper, better and faster!

Access of household broadband around the globe has become more widely accessible, and cheaper too, which lead to the increase in connected members and thus viewers' access to internet and online video content. Consumers having high speed networks and unlimited data plans are more likely enjoying this new era.

#### 8. Changing habits – anytime, anywhere access to online content

Gone are the days where children used to read comic books. With the increase in the accessibility of broadband services, demand for watching cartoons on their parents' tablets or smart phones has increased. Children are nowadays more attached to the broadband platforms rather than going outside and playing. From interesting episodes to cookery shows, from cartoons to daily soaps, from reality tv shows to interactive gaming, everything is available online 24\*7.

#### 9. No more waiting

With the increased usage of internet technology consumers don't have to wait anymore and watch some of the irrelevant advertisement that are shown during the broadcasting of the shows. A show that takes up a time slot of approx 30 mins is now reduced to approx 20 minutes without the advertisements.



Rushing home to make it on time for a particular show, Not anymore. With the advent of broadband based services, watching TV is becoming a matter of downloading an app and pressing play. Many consumers, analysts and futurists are pondering upon a definitive answer to this inevitable question, "What's next for television". Television is in a huge stage of flux, where the balance is swinging away from our traditional viewing habits.

While there's no doubt that TV is still the king and people still want to watch it, but the way in which it is being consumed is transitioning. Social and digital will be the future of Television. Viewers are willing to pay superior charges so that they can view the content as per their own convenience like Video On Demand or content free from advertisements. Over the passage of time viewers will be able to access faster and quicker broadband services which will lead to availability of rich content on the streaming platforms.

## CONCLUSION

This paper analyzes the transition of Television industry to modern TV viewing systems. The Television industry has passed through many phases like black and white TV, color TV, LCD,LED, Smart TVs, Plasma TVs, 3D TV's etc with each individual technology having its own unique feature set, benefits and various advantages and disadvantages to the viewers. But with the current technology, users can access more content easily and conveniently, thereby increasing the sensitivity of the content to the customers.

Till now, Netflix is the best commercial application for online streaming having large number of subscriptions across the globe. Further one of the drawbacks of this large amount of content being available on a single click is that users have become less social and more introverts meaning always connected to a device and disconnected from others. There are large number of competitors such as HBO, Amazon Prime, XBOX and Hulu who have just started to produce better versions of original content and streaming services available to gain attention of major audiences. The factors which helped current generation to switch to smart systems are more apps and websites for watching are easily available with just nominal cost providing features like portability, convenience and on demand supply services.

At last, TV will still have an important presence in our living rooms but the quality and technology used in Traditional system will keep on evolving to compete with its broadband based competitors.

## RECOMMENDATIONS

1. The cable universe is going to look a little more like Netflix that is recommending videos of our choice and subscription based.
2. Providing the service of live episodes available to the users the day it is launched, so it's binge-able, and the consumer feels more in control of the content.
3. Consumers want a la carte pay TV packages, paying only for the channels they watch.
4. Your TV will have a profile of your likes and dislikes and will suggest programming it thinks match your interests.
5. Consumers can have the ability to share programming and even mash up content from TV, creating your own content which might go viral.
6. Interactive gaming can be integrated with TV for the younger audience.
7. To provide better resolution of video and multimedia over cable networks at a nominal rates.

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