

Customer Perception towards Networked Streaming Service Providers with Reference to Amazon Prime and Netflix

Haritha Haridas, Sivapriya Deepak

Abstract: *Online video streaming services like Amazon Prime and Netflix have redefined the concept of movie watching and entertainment. They have become hugely popular worldwide. Their subscribers are increasing day by day. There is also intense competition between the two for getting viewer attention. In this context, the study aims at understanding the viewer perception about the two online service providers through viewer opinions collected from different social media platforms like Instagram, Facebook, Twitter, blogs, discussion forums, etc. Viewer opinions expressed online becomes electronic word-of-mouth for potential viewers who often assess the two platforms using the reviews of their peers. The opinions were checked for sentiments relating to content, audio/video quality, ease of use, and price related aspects of Netflix and Amazon Prime using the lens of e-service quality. The study analyses how sentiment analysis in Python has brought out the most favored service provider in terms of positive viewer reviews. For the study, the primary data was collected from reviews and was analyzed to look for patterns using the online text mining software called Voyant tool. The result of study states that Ease of use is an important aspect of e-service quality since both Amazon and Netflix are offered through technology aided platforms*

Keywords : *Perception, Netflix, Amazon Prime, e-service quality*

I. INTRODUCTION

Online streaming is becoming hugely popular across the world and also in India. This has been possible because of the development of information technology and web 2.0 which in turn has facilitated the emergence of mobile and web applications. They have touched all aspects of consumerism from online sale of products to online movie streaming. They have given consumers the freedom to tune in to their favorite movie or music at the tap of an app on their smart phone or allied devices. Convenience is the need for consumers now. Even searching for their favorite movie or music has become cumbersome for them, but thanks to the apps everything is now just a click away. Members of a family now want to watch movies of their personal choice on their mobile phones rather than watching it together. These kinds of personal needs are fulfilled by online video streaming service providers like Hot star, HBONOW, Netflix, Amazon Prime, etc. Gone are the days when viewers had to sacrifice other activities to watch their favorite TV shows on time. Now they can watch their favorite movies and TV shows anytime and anywhere on the device of their choice from the comfort and convenience of their homes through online video streaming service providers. Among all the online streaming service providers, the most popular ones in India are Netflix and Amazon Prime. Netflix was the first online video streaming

service provider that entered the market in 2007. Now it has over 150 million subscribers worldwide. Amazon Prime entered the market after Netflix and now it has over 40 million subscribers worldwide. Both of them are competitors that are fighting for the viewers' time and money. In such a situation, it becomes important to know about viewers' perception towards both the service providers. Viewers' perception will give important hints to the service providers to improve their services further and enhance the viewing experience for them. Viewers express their views on social media platforms now. Although Netflix has given viewers the right to rate their shows, but this is not enough for those viewers who like to express their opinion about the same. Web 2.0 has given viewers the freedom to express their experience with products and services on various online platforms like Twitter, Instagram, blogs, Facebook, etc. The reviews of viewers act as guiding lights to potential viewers who often use them as yardsticks before watching a movie or TV show. This study has collected 300 such reviews from various social media platforms to find out and analyze the sentiments of viewers towards Netflix and Amazon Prime. The collected reviews were analyzed in the backdrop of e-service quality.

The quality of service provided plays an important role in developing customer loyalty, trust, and competitive advantage for the service provider (Kao & Lin, 2016). For this reason, service quality has been extensively studied and used in various service industries. Service quality is the evaluation of service providers in terms of customer expectation of how a particular service provider should perform with the actual performance of the provider (Parasuraman et al., 1988). However, it cannot be applied as such to the study of online services like online shopping and online video streaming services because it is different from traditional service environments (Amin, 2016). This is because there is a lack of human interaction or very limited human interaction in online service environments. Consumers interact more with technology than humans (Cox & Dale, 2001). Therefore, factors influencing the service quality of online service providers are different from those of traditional service providers. The aim of this study is to explore the relationship between e-service quality and viewers' intention to watch movies online. The study intends to see which of the two online streaming video service providers, Netflix or Amazon Prime, is favored by the viewers more. Viewers' perceptions were checked against content, video and audio quality, ease of use, and price dimensions of e-service quality. Viewer opinions expressed for the above-mentioned e-service quality dimensions were collected from various social media platforms.

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Haritha Haridas, Student, MBA Amrita Vishwa Vidyapeetham.
Sivapriya Deepak, Student, MBA Amrita Vishwa Vidyapeetham.

The opinions were subjected to text mining to get an overall idea of viewer perceptions regarding both service providers. Then the opinions were again subjected to sentiment analysis to find out the exact emotion attached with each opinion. The results of this study hold important implications for both Netflix and Amazon Prime to enhance their service aspects related to the above dimensions.

II. REVIEW OF LITERATURE

Rapid proliferation of internet among the masses followed by growth of web 2.0 has led to the emergence of online platforms that engage in peer-to-peer sharing and collaboration (Kaplan & Haenlein, 2010). The sharing includes open source software to encyclopaedias to music and movies. Online sharing has now become a part of the emerging sharing economy. Sharing economy is a by-product of advancement in internet technology and it has made sharing of physical and nonphysical good and services simple (Hamari, Sjöklint, & Ukkonen, 2016). Sharing economy also called collaborative consumption or peer-to-peer-based sharing is becoming popular because of the preference of people to hire or borrow goods instead of purchasing or owning them (Botsman & Rogers, 2010). In a study on 254 CC platforms, Hamari, Sjöklint, and Ukkonen (2016) found that there are two main types of activities related to sharing of ownership. One is access of ownership and the other one is sharing of ownership. For example, lending online involves access over ownership whereas donating involves transfer of ownership. Netflix is an online movie streaming service provider which allows viewers to watch movies on rent for a fixed monthly fee over the internet. It encourages viewers to rate the movies that they watch. It has collected over 1.9 billion movie reviews so far from 11.7 million movie subscribers since October 1998 (Bennett & Lanning, 2007). Similarly, its rival Amazon, also an online movie streaming service provider has a huge subscriber base. It also comes with a subscription fee and has a huge repertoire of TV shows and movies. Amazon and Netflix also produces original video series which are quite popular with the masses. Although there are similarities between both the service providers, studies have found that Netflix wins over Amazon in terms of content and video quality whereas Amazon wins over Netflix in terms of pricing (ICFAI, 2018). Viewers were influenced by the opinion of peers for movie choices and the platform for viewing (ICFAI, 2018). Viewers give importance to the service quality of online streaming channels like Amazon and Netflix (Wenzel, Mahle, & Pätzmann, 2016). Service quality has been measured on RATER scale where R stands for reliability, A for assurance, T for tangibility, E for empathy, and R for responsiveness (Parasuraman et al., 1988). This study has taken the dimensions of audio and video quality, content, ease of use and price as criteria for assessing service quality perceptions of viewers of Amazon and Netflix. As shown in model 1

III. OBJECTIVE OF STUDY

To study that important aspect of e-service quality of Amazon and Netflix through technology aided platforms patterns using the online text mining software called Voyant tool

IV. HYPOTHESES

H1: e-Service quality of Amazon and Netflix has an impact on viewer perception towards Amazon and Netflix.

H2: Viewer perceptions towards Amazon and Netflix has an impact on intention to watch.

V. RESEARCH METHODOLOGY

The current empirical study is mainly based on secondary data. The secondary data used for the study was collected through various online sources. The sample size of reviews taken for the purpose of the study was 600 reviews. The collected data has been analyzed by using Voyant tools. The reviews were taken from the user who have already used the online stream services. The study has used sentiment analysis to test the above mentioned hypotheses. Sentiment analysis is an important tool to study customer perceptions.

As to get a further understanding of the study, we use 2 methods for the analysis of the data:

A. Sentimental analysis

Sentiment Analysis is the process of determining whether a piece of writing is positive, negative or neutral. A sentiment analysis system for text analysis combines natural language processing (NLP) and machine learning techniques to assign weighted sentiment scores to the entities, topics, themes and categories within a sentence or phrase (1).

B. Text mining

Text mining is that the method of etymologizing high-quality info from text. Text mining typically involves the method of structuring the input text etymologizing patterns at intervals the structured knowledge, and eventually analysis and interpretation of the output. For this study, the reviews were taken from mouthshut.com and that were text deep-mined with the assistance of voyant tools.

VI. RESULT AND INTERPRETATION

Data was collected from Facebook and Instagram. The study collected 60% reviews from Facebook and 40% reviews from Instagram. The reviews contained both negative and positive opinions about Netflix and Amazon. A total of 600 reviews were collected for the research in two phases: During the first phase data was collected which was basically customer reviews about Netflix and Amazon. Customers express their experience with product or services through social media now. It has become an important source for product or service reviews for potential consumers and service providers. The reviews were collected from social media sites such as Facebook, Instagram, Google reviews, blogs, official websites, etc. In the second phase the collected data was analyzed to look for patterns using the online text mining software called Voyant tool. It is a web-based application for text analysis. This software creates cluster of words that specifies the frequency of each major keyword contained in the textual data (4). Words that were repeated maximum number of times for Amazon and Netflix were identified from that cluster. The keywords available in the tool helps to understand the context in which the most frequent words are used. In this way, correlations can be identified among the words.

The 600 opinions collected for this study expressed both positive and negative sentiments towards Amazon and Netflix. In order to arrive at valid conclusions from the study, the word clusters were subjected to sentiment analysis using Python. The results for Amazon and Netflix obtained through text mining using Voyant tool and sentiment analysis using Python are summarized in tables below.

A. Text Mining using Voyant Tool

The word cluster obtained after subjecting 300 reviews for Netflix (out of a total of 600 reviews for Amazon and Netflix) is shown in Table 1. The term "good" appeared 120 times in all the 5 reviews for Netflix. This was followed by words like love, great, amazing etc. This shows viewers perceived Netflix to be good in terms of viewer satisfaction. (figure 1) The word cloud and word count obtained for Amazon through text mining in Voyant tool is depicted in Table 2. The word "good" appeared 74 times for Amazon followed by words like great, amazing, etc. (figure 2) Viewers had a good perception towards Amazon too.

B. Sentimental analysis

The customer perception differs for both Netflix and Amazon. Sentimental analysis is used in order to understand the perceptions of the customers towards different Netflix and Amazon Prime. The results of the sentiment analysis for both Netflix and Amazon are shown in figure 3 and figure 4 Netflix A total of 10,530 subjective expressions from 300 documents (7250 sentences) were given a contextual polarity as shown in Table 3. Of the 7250 sentences, 25 percent contained no subjective expressions, 25 percent contained only one subjective expression, and 48 percent contained two or more expressions. Out of the 3480 sentences that had two or more than two expressions, 18 percent contained a mixture of positive and negative expressions, and 60% had positive expressions (polarity greater than 0), and 22 percent were negative expressions (polarity less than 0). As shown in Table 3 Amazon A total of 10,600 subjective expressions from 300 documents (7800 sentences) were given a contextual polarity as shown in Table 4. Of the 7800 sentences, 20 percent contained no subjective expressions, 20 percent contained only one subjective expression, and 60 percent contained two or more expressions. Out of the 4680 sentences that had two or more than two expressions, 10 percent contained a mixture of positive and negative expressions, and 60 percent had negative expressions (polarity less than 0), and 30 percent were positive expressions (polarity greater than 0).

C. Comparative Chart

A comparative chart showing the results for text analysis using Python has been depicted in figure 5 & figure 6. The results indicate that viewers have expressed more viewing satisfaction with Netflix as compared to Amazon. The results from Voyant tool text mining and Python analysis are consistent in terms of the number of positive sentiments expressed by viewers for Netflix as compared to its rival Amazon. The overall viewership experience offered by Netflix along with its attractive membership plans makes Netflix as the most preferred online streaming service compared to Amazon prime.

D. Findings

Overall results indicated that Netflix has emerged as the most popular streaming video services when compared to its rival

Amazon prime. It is quite popular in the US and of late it is becoming 6 popular in the Indian market too. Amazon prime is emerging as its biggest rival because consumers are already familiar with the online shopping platform provided by Amazon. Both of them are similar in terms of the category in which they belong to, that is video streaming services, but sentiment analysis has shown that both of them differ from each other on various aspects of service quality, mostly related to the tangibility and reliability aspects of service quality. Price is one of the tangible factors used to analyse service quality. In terms of price, viewers have expressed the opinion that Amazon prime is more affordable compared to Netflix. Netflix offers three options for subscription which includes the recent 199 (\$2.88) per month for mobile device viewing only. It offers basic (Rs 499), standard (Rs 649), and premium (Rs 799) subscription offers. Amazon, on the other hand, offers an yearly subscription fee of (Rs.1000) for all users with the additional benefits of shopping discounts for the subscribers on its online shopping platform. Both Amazon Prime and Netflix offers ad-free access to its collection of movies, TV shows, and web series at the above mentioned subscription fee. Netflix offer ultra HD video quality to its premium subscribers only, whereas Amazon offers this to all its subscribers. Another tangible aspect is content. The competition on this aspect is getting closer for both the video streaming service providers. There are thousands of movies from across the globe on Netflix along with documentaries, TV shows, and Netflix's original productions. Netflix's original productions are a big hit with the viewers. In fact, sentiment analysis also showed that viewers liked its original productions more than movies. Amazon also has a vast collection of movies, TV shows, and Amazon original series. Viewers have expressed the opinion that the movie collection of Amazon is older compared to Netflix. Netflix has comparatively newer movies and that too blockbusters on its chart compared to Amazon. Audio and video quality are tangible aspects that play important role in viewer satisfaction. Amazon offers a wide device to device interface compatibility but it offers the best audio and video quality with its own Fire TV media player. Viewers have expressed their opinion for Amazon's smart TV interface as "not so great." It also does not offer multiple profiles for users which is also a big deterrent to its acceptability. There has been no negative opinions expressed for its video quality which was opined to be "very good" but viewers also opined that the video quality "varies" from device to device. On the other hand, Netflix offers high quality video and audio consistently across any device. It also gives the option of creating multiple user profiles. Therefore, in the arena of audio and video quality, it is Netflix that has scored over Amazon Prime. Ease of use is an important aspect of e-service quality since both Amazon and Netflix are offered through technology aided platforms. Viewers have opined the user interface of Netflix as "user friendly" as compared to Amazon which received opinions such as "not so easy" and "could have been better." The Netflix user interface has been opined as "smooth" as compared to Amazon Prime. It was opined by viewers that Netflix has a reactive / responsive search, but Amazon Prime asks viewers to give one extra click to reach their search results.

From the study, Netflix emerges as the clear winner scoring over the aspects of audio-video quality, content, and ease of use whereas Amazon Prime has been vouched for its pricing of subscriptions and offers on the online shopping platform

VII. CONCLUSION

Based on the results, we can assume that the biggest strength of the Netflix is its service. This is supported by the fact that the most frequent words are related to how the provide service to the customers. These include “good,” “love,” movies” “great,” and “excellent.” Most of the people were also unsatisfied with Amazon prime

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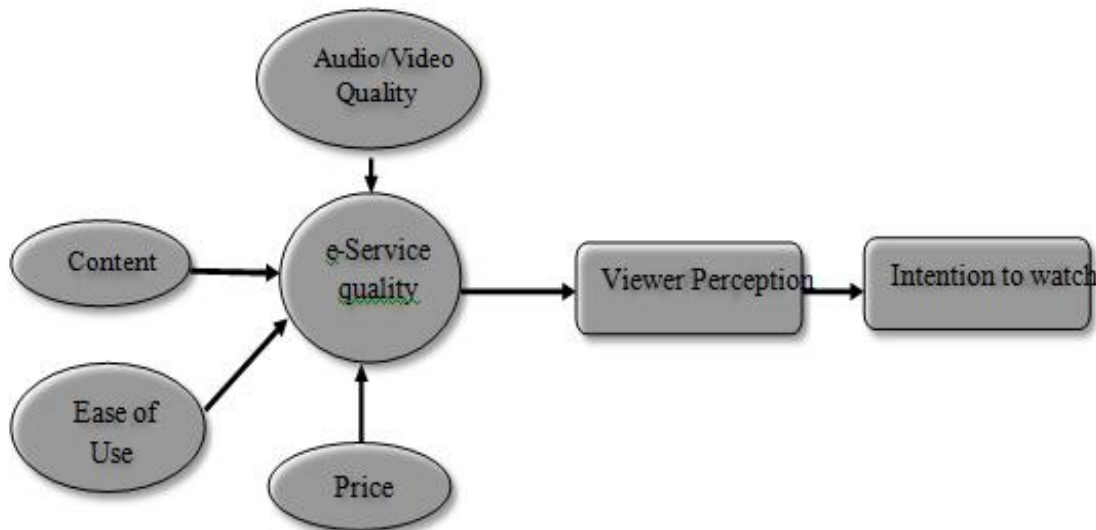
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APPENDIX



Model 1 : Ease of use and price as criteria for assessing service quality perceptions of viewers of amazon and netflix.

Table 1 : The word cluster obtained after subjecting 300 reviews for Netflix

TERM	COUNT
Good	120
Love	74
Movies	73
Great	60
Netflix	59
Shows	52
Amazing	48
Watch	40

Table 2 : The word cloud and word count obtained for Amazon through text mining in Voyant tool is depicted

TERMS	COUNT
Movies	75
Good	64
Like	53
Great	50
Love	43
Amazing	38

