

# A Study on Trend in Live Streaming Practices In India

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**Abstract:** *Even though Live Streaming is on the rise in North America and Far East Asia, its popularity in India is still negligible. Since 2016 there has been an Internet Bloom in India because of the telecom revolution. As a result, there was a sudden upsurge in Live Streaming popularity. During the IPL Finals between Mumbai Indians and Chennai Super Kings in 2019, Hotstar a Live Streaming platform recorded 18.6 million concurrent viewers. To study this online gathering technological occurrence in India we conducted a survey of streamers and viewers. Based on their streaming, viewing and interacting practices, we conducted an online survey of 23 people and even interviewed 3 streamers apart from that we even researched about peoples search query using Google Trends. We figured out the mood and reaction of people using Twitter Sentiment Analyzer. The collected data revealed how different viewers react to different types of streaming content and streamers. We also observed the viewing perspective of viewers and the stimulus behind the streamers and even studied the interactions among the audience as well as between audience and streamers. Based on the collected data, we are predicting the scope of live streaming in India and what is the future of live streaming in India*

**Keywords:** interaction, live-streaming, platform, reward-system.

## I. INTRODUCTION

Over the recent years, India has seen tremendous rise in data consumption due to falling prices of internet and good quality handsets being available at low price. These handsets are equipped with high quality camera sensors, audio recorder, high-speed internet and current gen processors. Due to these factors, there has been increase in the popularity of many fields including live streaming. These live streaming platforms have provided opportunities to users to host live streaming event, hold talk shows, IRL, gaming, remote conference etc. Hotstar, one of the most popular live streaming platform in india has more 300 million monthly users. This number of 10-20 million people might sound astounding but seeing the population of India this is just tiny drops in the ocean. There are few number of research paper related to this topic but none of them is made in context of India. The content on this live streaming services mainly differs from those available and streamed across North America and Europe in terms of form and style, it mainly depicts the culture, tradition, choice, common sense, humour, slang and cuss words by Indian people. The studies conducted on the live streaming habits of American and European people have found that they exclusively use it for live events, gaming and sharing among close friends. While for people in China they mainly use live stream for pan-entertainment like singing, dancing, music instruments, talk-shows, personal knowledge and experience sharing. Although the differences and similarities in various parts of the world are identified but the question is what makes the live streaming in India so cultural, traditional, personal and news oriented.

To study this online gathering technological occurrence we conducted an online survey of 23 people and interviewed 3. The survey queried about their streaming, viewing and interacting practices and how different gender, age group react to different types of streaming practices. To track the popularity of keywords and live-streaming platforms based on various regions in India, we used Google Trends. We even analyzed the mood of people using Twitter Sentiment Analyzer. Our results revealed that Indian viewers are more engaged towards sports and news related stuff rather than live events, gaming and personal experience which is popular in US, Canada, Europe and China.

Our study will promote further research on this topic and inform developers to design new and update the existing platforms which is suitable for Indian audience and streamers.

## **II. BACKGROUND AND RELATED WORK**

Here, we provide the background of live streaming work in India. We also presented the related work regarding general streaming, vlogging and gaming on Youtube, Hotstar, twitch.

### **Live Streaming in India**

Live streaming is now more than \$10bn industry in the world of which large chunk of this pie is made up of game streamers whereas Indian live streaming industry is mostly focus on streaming sports event or host general live streaming events. Recently as the popularity of games like pubg, fortnite etc has increased in mobile gaming, the online gaming market is projected to become a billion dollar industry by end of 2020 on the back of mobile gaming. Large amount of this income comes from streaming. Live streaming in India is gradually shifting from big companies content to an individual creator content. A streamer name dynamo has started generating 13mn monthly views by streaming pubg. There are various other types of streaming that is popular in India like vlogging, live streaming podcast, weekly talk shows.

### **Youtube**

Youtube is the biggest platform for steaming games and vlogging. There are many emerging live-streamers from India who are leveraging YouTube to grow their presence in nascent space. In North America and China twitch.tv is the most popular platform for game live streaming. But in India, it's only YouTube as a popular platform for live streamers and gamers. One of the key reasons behind YouTube's success in India is the existence of a broad local content portfolio. But specifically for gamers, YouTube claims that the country is its third-largest gaming market.

### **Hotstar**

Out of all streaming platforms in India, Hotstar has the biggest number of audience. Hotstar said last month that its service has amassed 300 million monthly active users, up from 150 million it reported last year. It is an one way communication streaming platform, viewers can watch the streaming without interacting with streamers. Most of the views generated from streaming live sports event and dramas. Easy to use and easily available are the reason it has biggest market share in India.

### **Other**

Live Streaming on mobile devices in India is more popular than North America and China. There are various app especially designed for Indian market are available now. Nimotv is the application designed by tencent games used by gamers in India. Beside this sonyLIV, aaj tak, times are some of the application focus on journalism, activist event and activist meetings. Twitch.tv is the most popular app for streaming in America and Europe, but it has only small number of audience in India.

## **III. METHODS**

Seeing the vast diversity and culture of every single region in India and being concerned about bias in the data we used four different approaches to analyze and study.

### **Approach 1:**

Online Survey & Face-To-Face Interview

We collected responses on a few sets of standard questions using an online survey built on Google Forum and even interviewed a few people. The reason behind doing this was to know about people's choices, their awareness of live-streaming platforms, viewing, streaming habits and what kind of improvements are needed to be taken place on various platforms.

Survey Questions

Q1) Your Age?

Q2) Your Gender?

Q3) Your city of residence?

Q4) How many live-streaming platform do you use?

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- Q5) Which platform do you use?
- Q6) On average, how many hours do you watch stream every day?
- Q7) What are your streaming practices?
- Q8) Any suggestions on how to improve the streaming platforms in India?

The first three questions were personal, which were focused to know about the age group, gender, and locality. Questions four to seven were mainly designed to know about their awareness, use, and participation on various live-streaming platforms. People's perspective on the existing live-streaming platforms and what improvements needed to be done was our main focus on asking the last question.

Our interview questions consisted of all the survey questions, including a few more questions related to their preference, comparison between Indian and foreign stream and their motivation behind streaming or viewing. Each interview lasted about 10 minutes.

### **Approach 2:**

#### **Google Trends**

We came to know about people's querying habits based on different regions in India and even did a full-fledged comparison of various terms and platforms using Google Trends. It gives results based on the frequency of specific keywords in search queries over time. We used keywords related to our topic.

Some of the keywords which we used were Live-Streaming, *YouTube* Live, Hotstar, Twitch, Facebook Live, and Periscope. We also did a comparison between all these platforms and even analyzed their popularity in different states of India over 12 months and the past 5 years.

### **Approach 3:**

#### Twitter Sentiment Analyzer

We used twitter sentiment analyzer to know about the mood and reaction of people on social media using various keywords and platforms related to live-streaming. Here we used keywords like Hotstar, twitch India, live-streaming India, Periscope India. The reason for adding India with all the keywords except Hotstar was to get the analysis of localized tweets, as all the other platforms except Hotstar are mostly used by other countries

### **Results**

Our approach consisted of 3 different ways to gather the information from surveys. We used google forms for surveys& interviews, trends and sentiments to know the details of the most popular live streaming sites in India. Our results are more dependent on the google trends which uses frequency of keywords in search queries and sentiments analysis from twitter as these are most reliable, unbiased ways to get the data from massive number of communities. We were able to gather 23 responses from 6 different cities in India and interviewed 3 people who were willing to share their personal experience with live streaming. We also did a comparative analysis of all the live streaming websites based on different parameters like demographics and subregions based on different timelines. Based on these methods, we have divided our results into 3 sections namely **Survey&Interviews, Google Trends and Twitter Sentiments Analysis.**

#### **Survey & Interviews**

This approach uses 8 questions common for both methods and few additional questions for personal interviews.

First 3 questions were personal questions like the age, gender and residence of the person. Next 5 questions were based on their streaming practices, habits and their awareness about live stream websites. Last was optional and it was a suggestion from their side to improve the live streaming in India.

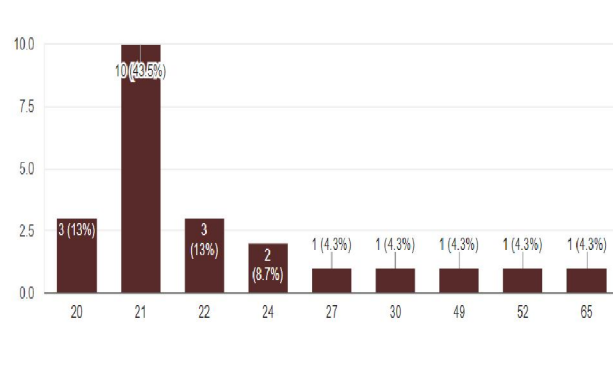
Below are the graphical representations of different questions.

The age division.

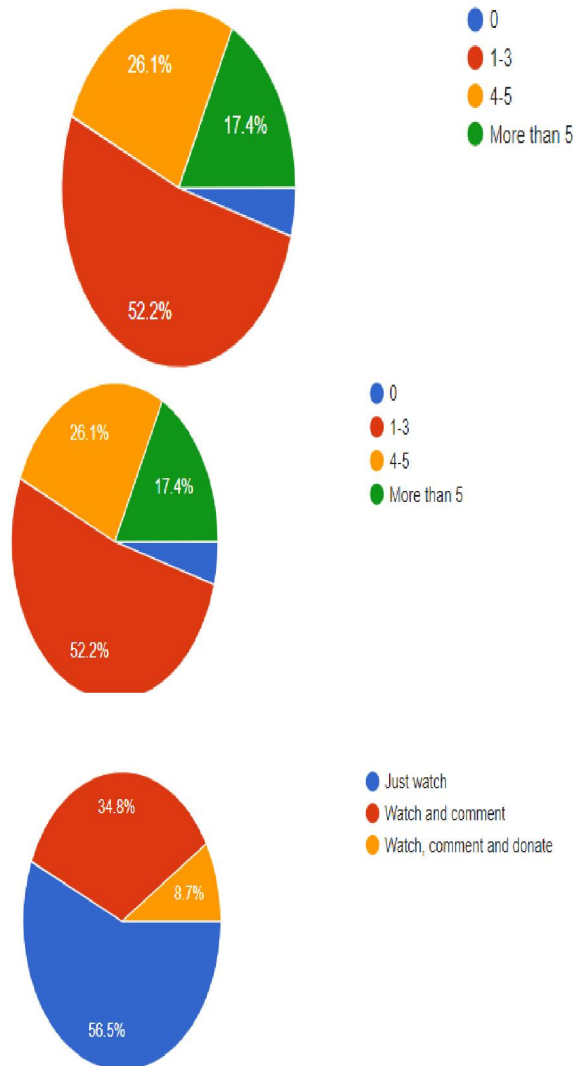
Most people were from age group 20-24.

Few people also were from age group 30-65

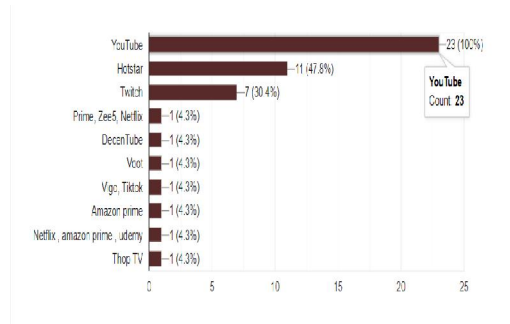
This ensures that millennial are most interested in live streaming



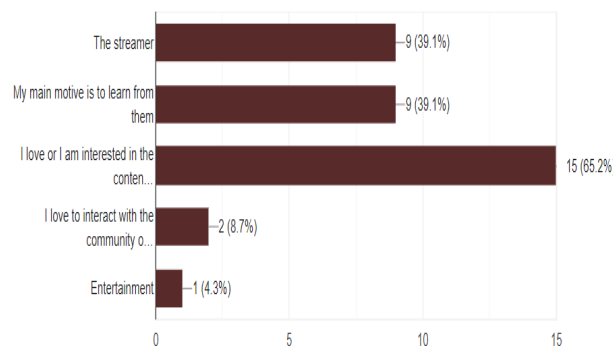
The gender share was dominated by males, so our data from google survey forms did not reach many people from other genders and the number 23 is also very small to be a sample from a big country. We got responses from 8 different cities in India which shows diversity.



Its evident that all of the users knew at least 1 site and 4 of them knew more than 5  
 Distribution of all websites by multiple choice options.  
 Its evident that all users knew YouTube.  
 Second and third most selected were Hotstar and Twitch as we had already assumed.  
 We also got to know about the lesser famous sites through personal responses from users.  
 Streaming duration for different users.  
 Most users watch stream for 1/2-1 hrs.  
 2 users watched for more than 3 hrs.



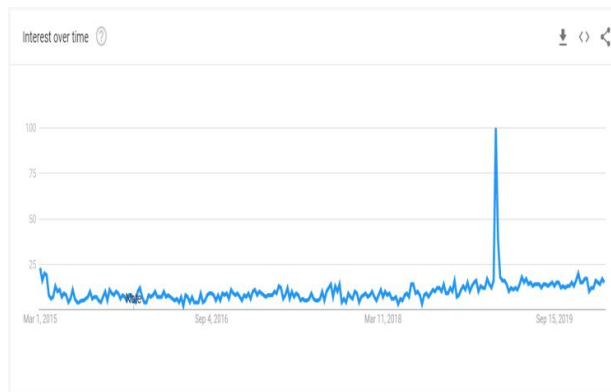
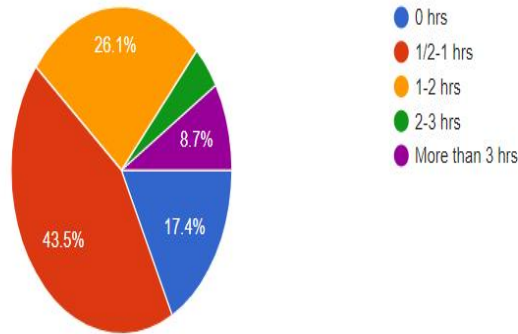
As we can see, most users are interested in just watching the stream and good number of people like commenting while watching.



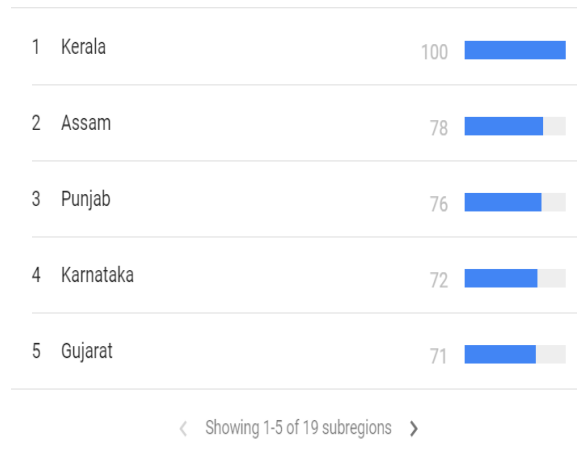
Most people are interested in the content of the streamer and like to interact with the streamer and community.  
 Personal responses from the users and suggestions:  
 Many people asked for centralized and relevant ads to be shown on the stream and also many people wanted the stream to be available offline later so they can watch the missed streams too.

**Google trends**

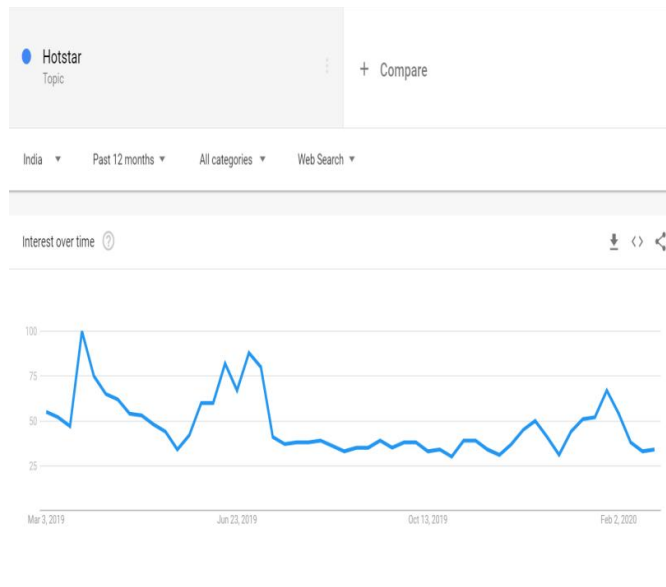
We used Google trends to do analysis of trends of different livestream sites and also did comparative analysis. Google trends offer you to search for a keyword and based on the frequency of keywords, it shows the popularity. It used different search categories like News, YouTube, Web search, Google Shopping, Image search to figure out the result. General trend for live stream search in India for past 5 years.



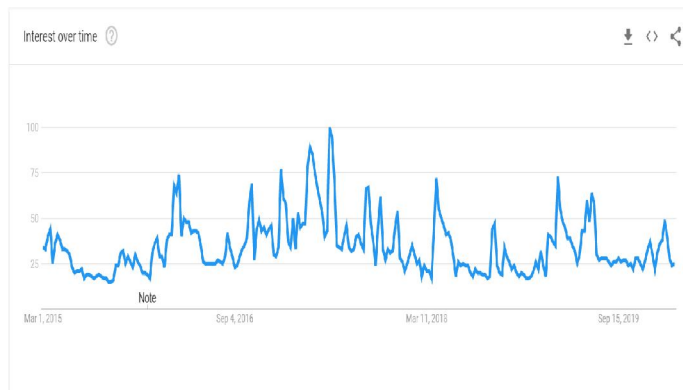
State wise trend shows its popular all over India.



Below are some snips of trends about famous live streaming sites in India with a varying timeline(12 months and 5 years).



Hotstar 12 months trend in India

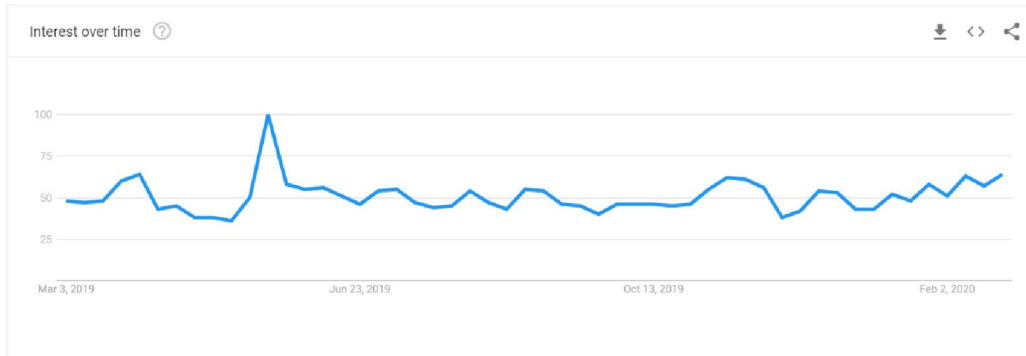


Hotstar 5 years trend in India

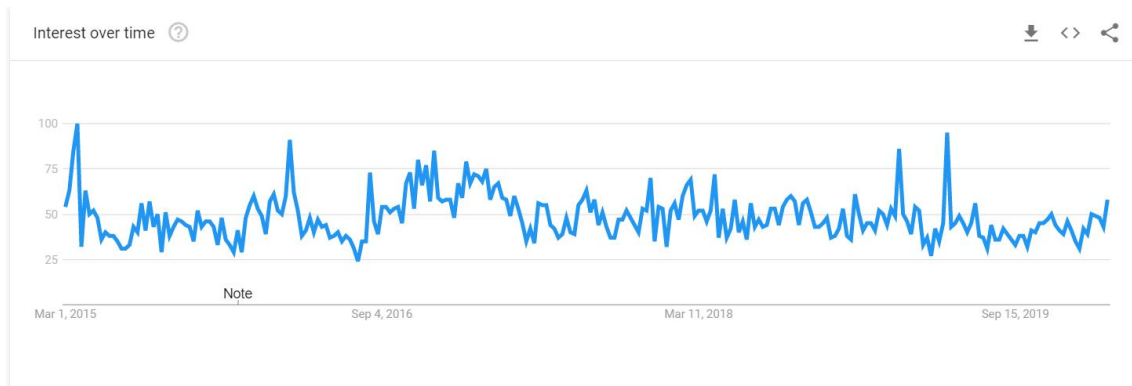
1	Andhra Pradesh	100	<div style="width: 100%;"></div>
2	Telangana	93	<div style="width: 93%;"></div>
3	Puducherry	92	<div style="width: 92%;"></div>
4	Kerala	80	<div style="width: 80%;"></div>
5	Tamil Nadu	71	<div style="width: 71%;"></div>

< Showing 1-5 of 35 subregions >

As seen, these are the 5 states where Hotstar search trend is most. It is popular in South India the most compared to other regions.



YouTube live 12 months trend

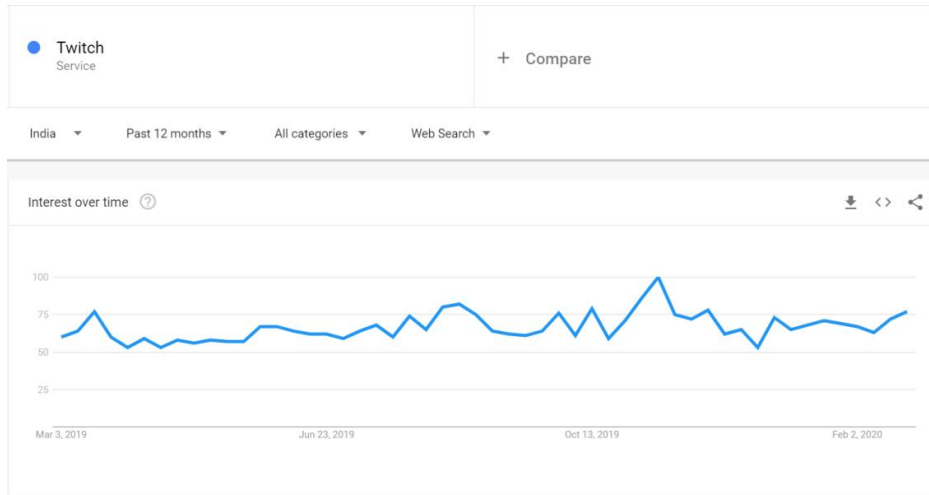


YouTube live 5 years trend

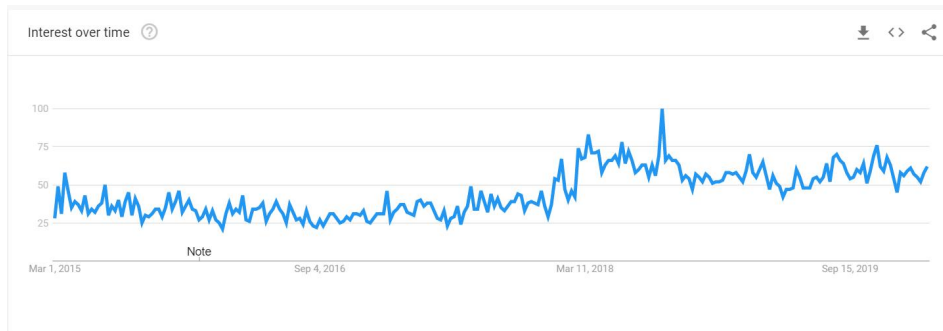
1	Tripura	100	<div style="width: 100%; height: 10px; background-color: blue;"></div>
2	Telangana	51	<div style="width: 51%; height: 10px; background-color: blue;"></div>
3	Punjab	48	<div style="width: 48%; height: 10px; background-color: blue;"></div>
4	Andhra Pradesh	48	<div style="width: 48%; height: 10px; background-color: blue;"></div>
5	Himachal Pradesh	45	<div style="width: 45%; height: 10px; background-color: blue;"></div>

As seen, these are the 5 topmost states where YouTube live is streamed most. It is most popular in North India.





Twitch 12 months trend

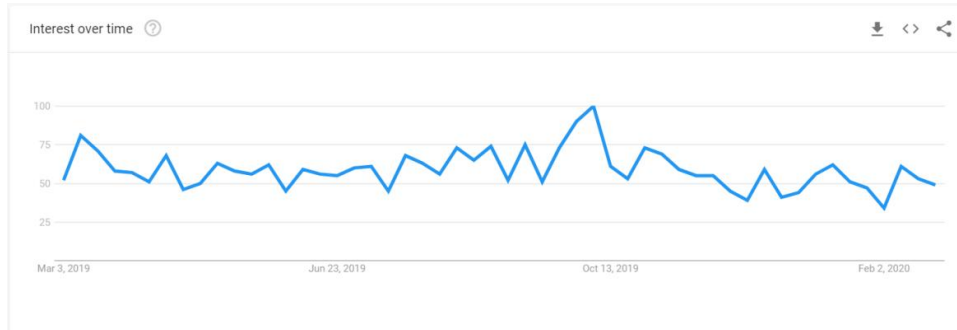


Twitch 5 years trend

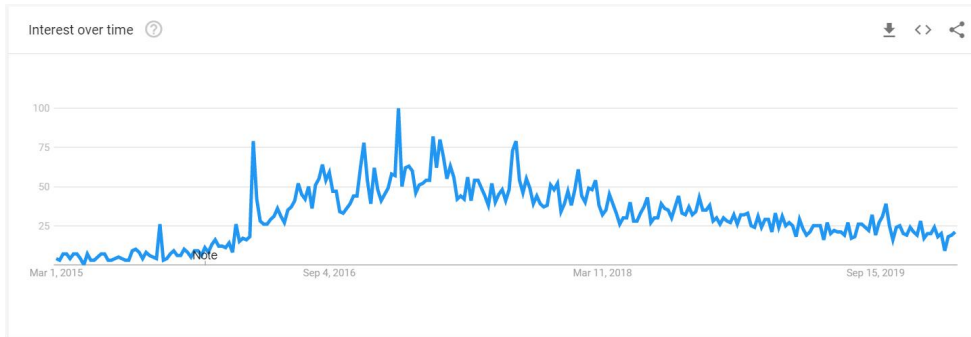
1	Mizoram	100	<div style="width: 100%; height: 10px; background-color: blue;"></div>
2	Nagaland	64	<div style="width: 64%; height: 10px; background-color: blue;"></div>
3	Goa	34	<div style="width: 34%; height: 10px; background-color: blue;"></div>
4	Meghalaya	33	<div style="width: 33%; height: 10px; background-color: blue;"></div>
5	Karnataka	24	<div style="width: 24%; height: 10px; background-color: blue;"></div>

< Showing 1-5 of 30 subregions >

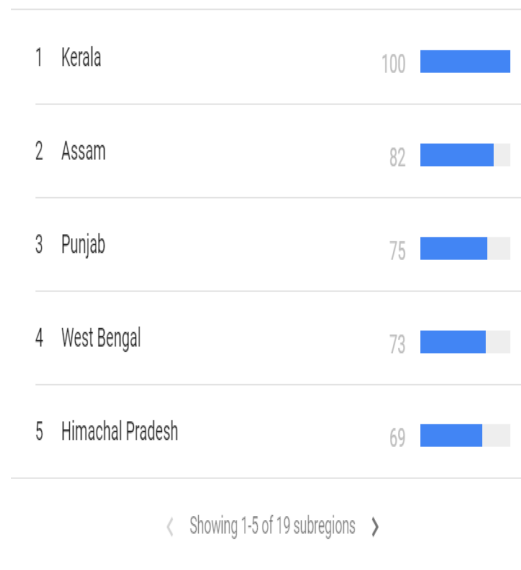
These are the 5 states where Twitch live stream trends the most



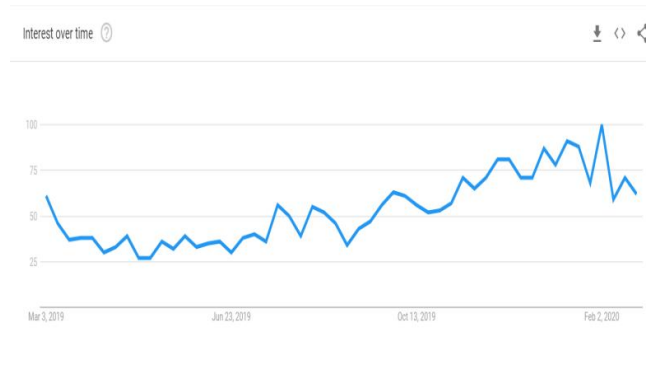
Facebook Live trend for 12 months



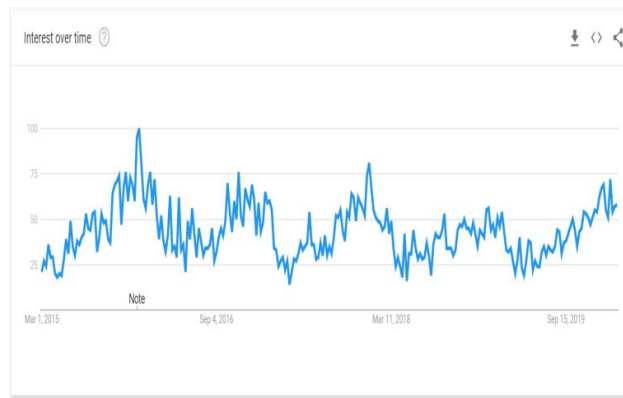
Facebook Live trend for 5 years



These are the 5 states where Facebook Live was streamed the most.(South and North East India)



Periscope trend for 12 months

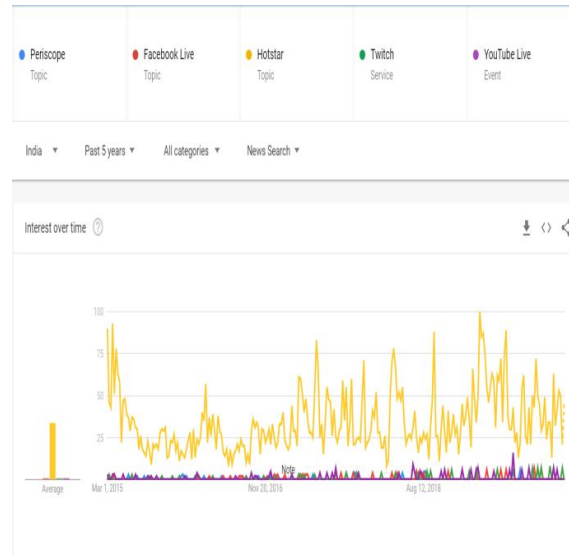


Periscope trend for 5 years

1	Arunachal Pradesh	100	<div style="width: 100%; height: 10px; background-color: blue;"></div>
2	Uttarakhand	56	<div style="width: 56%; height: 10px; background-color: blue;"></div>
3	Andhra Pradesh	36	<div style="width: 36%; height: 10px; background-color: blue;"></div>
4	Telangana	32	<div style="width: 32%; height: 10px; background-color: blue;"></div>
5	Haryana	31	<div style="width: 31%; height: 10px; background-color: blue;"></div>

< Showing 1-5 of 24 subregions >

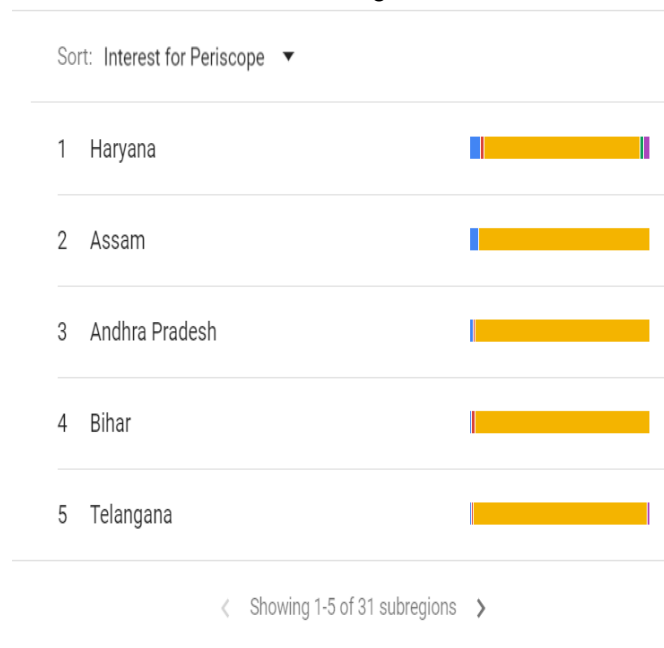
As we can see, Periscope trends the most in North East India.



Comparative analysis between above mentioned 5 platforms.

Its clearly evident that Hotstar is much more streamed than rest all combined. Hotstar offers both cricket live broadcasting and streaming of serials.

Hotstar had reached a record of 18 million live streamers during IPL in 2019.



#### IV. CONCLUSION

We studied users live streaming practices in India and how their awareness, use, engagement, motivation about the platform differs based on different age group and demographics in India. We conclude that the current streaming practices in India are heavily focused on live sports events and news related stuff. As a result the platforms which focus on these types of content are currently popular in India. Recently, there is massive increase in gaming infrastructure in India which has brought many individual content creators in live streaming market. There is huge scope of game related

streaming in India. In India, there is a need to support the deeper and richer interaction between streamers and viewers by building a local one stop eco-system.

We can see, all the North states stream Hotstar the most compared to other states and other platforms.

Gaming platforms like Twitch are least popular right now as it is not free in India.

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