



Behavioral Intention and Attitude of IPL Spectators through different channels during Covid-19 Pandemic

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Abstract

Behavioral intention and attitude of a consumer is dynamic and therefore the businessman providing the product or service should take into account the changing behavior of their customers. Every customer is supposed to be happy and under consumer behavior it is termed as "Hedonics". Indian Premiere League is none other than a premium product of sports industry smartly designed to bring all the players from around the world into India and in a way develop the Sports Tourism. All these after effects are affected by the changing behavior and attitude the spectators or fans show towards watching this particular T20 game of cricket. Every behavior that fans show and their attitude towards the game, towards people around them, towards the players are observed and the reasons for that particular positive or negative behavior is found out in this particular research. As social media plays an important role in understanding as well as provoking the behavior of the people so it is also taken into account how spectators of IPL reacts on social media like Facebook, Twitter and Instagram. Qualitative research is being carried out to judge the intentions of people being active on social media platforms on account of this particular sport match event. Our research aims to throw a light on the effects of IPL on psychology of spectators: the positive as well as the negative effects that people inculcate within themselves.

Introduction

"Sports can create hope where once there was despair. It is more powerful than governments in breaking down racial barriers. It laughs in the face of all types of discrimination" – Nelson Mandela

Indian Premiere League (IPL) is a twenty-twenty match series that is conducted every year by BCCI in the month of March-April. Initially there were eight teams under the name of eight big cities of India and cricketers from all over the world participate in this series. Actually good enough a reason to be the most attended cricket event in the world. Reasons behind: it is conducted in India and Indians are big fans of cricket. Secondly the teams are named after cities and the ethnicity enables the Indians to relate to a

particular team and therefore they have the fanatic nature to attend the matches. Over the last decade, we have witnessed a cricketing carnival in the form of the Indian Premier League. The exhilarating, edge-of-the-seat action of the Twenty20 (T20) format, coupled with the glamor of Bollywood celebrities, global cricketing talent, interest of business tycoons and fan frenzy has catapulted IPL to the pinnacle of sports entertainment in India and the cricketing world.(Dulphs and Phelps 2018). IPL is an Indian Product, sale of who's ticket has contributed to the growth in Indian GDP. On 13 September 2007, the BCCI stated the start of a franchise-based Twenty-twenty cricket competition called Indian Premier League whose first season was to start in April 2008, with a big inauguration in The Capital of India, Delhi (Wikipedia). In this research we have conducted a qualitative analysis through reading the past research papers on cricket, or any game, how does the behavior of the spectators change or get affected due to any reasons. We have studied the attitudes of spectators as well. As we know psychology varies with gender for an example, a male is more keen to watch a sport event rather than a woman. The game loyalty varies from a married person to LGBTQ of society. Practices like pre booking of tickets, online piracy of live telecast, sport travel, betting or match fixation are one or the other behavior of fans only. Some fans associate themselves with positive constraints while some with negative. Over the last few years digitization is increasing rapidly, leading to the rise in importance of Over the Top (OTT) platforms for viewership growth in the IPL. The tournament's online viewership presence is perhaps best highlighted by Hotstar setting a world record of OTT viewership with 10.7 million concurrent viewers for the 2018 IPL final, beating the 2012 world record of over 8 million concurrent viewers held by YouTube for Felix Baumgartner's space jump. The increasing OTT viewership trend was also observed during the previous edition, according to the Ernst & Young FICCI Report 2018, when the average time spent on Hotstar watching IPL went up from 30 to 35 minutes for IPL 9 to 40 to 45 minutes for IPL 10. Clearly, OTT sports viewership no longer remains a prospect, but has become an established and fast-growing market (Economic times). Putting an end to all uncertainty, the Board of Control for Cricket in India has announced that the Indian Premier League 2020 will start on September 19 and end with the final match on November 10. The matches will be played in the UAE and Jay Shah, the secretary of the board, has said, "The 53-day tournament will witness 10 afternoon matches starting at 15:30 IST, while the evening matches will start at 19:30 IST."

The teams have reached UAE and we can see the posts of their practice on various social media. The uncertainty of conduct of the cash cow of sports is finally into an end. Virat Kohli posting Instagram videos getting lacs of comments show the inclination of Indian people towards this IPL even at the time of national emergency. The idea of shifting the matches to UAE generated from the brilliant mind of BCCI president and former Indian Captain Sourav Ganguly paved the way through our eagerness to boost the adrenaline rush. Through this, many companies like advertising companies and many more will be benefitted economically amidst the economic slowdown. A ray of hope for many. The television industry has had the worst possible beginning to this financial year. For most of the first quarter (April-June), the country was in a complete lockdown, resulting in advertisers pulling out from most of their marketing activities. Reports suggest broadcasters might end the July-September period with a 65 per cent regrowth

compared to the same period last year. However, experts feel, ad spends will gain momentum on the back of the Indian Premier League.

MATCHES		NEWS		TABLE		PLAYERS	
Season 2020							
Team	M	W	L	NRR	Pts	Last 5	
1 MI	14	9	5	+1.107	18	×	✓
2 DC	14	8	6	-0.109	16	✓	×
3 SRH	14	7	7	+0.608	14	✓	×
4 RCB	14	7	7	-0.172	14	×	×
5 KKR	14	7	7	-0.214	14	✓	×
6 KXIP	14	6	8	-0.162	12	×	×
7 CSK	14	6	8	-0.455	12	✓	×
8 RR	14	6	8	-0.569	12	×	✓

Figure 1.1: Points table

The IPL 2020 being conducted in Abu Dhabi, fans were disappointed of not attending it physically but yes they were all excited that OTT release of the live matches of their favourite team will make their adrenaline rush even faster. IPL 2020 started with the match of the two consecutive champions Mumbai Indians Vs Chennai Super Kings. We could see the overflow of memes of MS Dhoni playing after more than 400 days. It was the 100th win of MSD as a skipper. We can understand the audience pressure on the players are not working as before as there are only virtual audience this time. Still BCCI has arranged all sorts of encouragement for the players like virtual cheer leaders and virtual claps and sound of joy by the audience as soon as there is a boundary or a wicket. Abu Dhabi is experiencing all new sort of sport facility all possible for us and the whole world is just because this pandemic has made a paradigm shift of normal. In this research we have undergone the survey of these behavioral inferences only those fans portray in reality. That how can craze of a particular team or player encourages people to act on several grounds.

Research Questions:

RQ1. To learn the in-depth perception about the variation in the behavior of spectators in IPL during Covid-19 Pandemic.

RQ2. To understand the effect of gender on spectators' psychology in IPL.

RQ3. To explore the appropriate ways that enhances the efficiency of spectator's viewing experience as well as revenue model of IPL.

Literature Review

Comparison of Behaviour between Sexual Minority and Heterosexual Sport Spectator in Thailand is the focus of study. How the behaviour of a sport fan is based on the gender he/she belongs to and their attitude towards life. LGBT and heterosexual people have different behaviour towards the volleyball league

conducted. They react to the win-lose situation in different way. The fan behaviour as well changes along with this. Spending on official merchandise is more by male than any other. The level of loyalty and passion is same in male and LGBTQ whereas females are lower in this. The overall involvement is most among LGBTQ strata. From here we can find out how in Cricket several strata react and the team loyalty in Case of IPL can be found [1].

This study revolves around Sports events and development of local economy: IPL match in Mohali. Sports is a new constraint adding up in travel and tourism industry. People travel internationally to have insight of their favourite team. This creates a platform for future tourism developing the local economy of India with more surge in foreign currency. The further research can be made in IPL going through interstate travels to watch the match of their favourite team and their psyche in doing so [2].

Five major factors to influence were found out named as: Team Penchants, Team achievement, Social Acceptance, Geographical Factor and brand association. The study is limited to only Jalandhar. We can analyse other parts and relate them that why are the people attracted to a particular Team. We can use this particular study done by Mr. Avtar Singh in recognizing behaviour those are predominantly present PAN India. [3]

The association with travellers who have a game craze can upgrade sports vacationers' involvement. From this qualitative study we can further explore the social and mental universe of Diversion Vacationers [4]. While we talk about the fantasy of cricket in India and particularly taking into consideration IPL as a subject, fan craze is one of the behaviour that is to be studied very keenly and precisely. Fans define a sport. In this paper we have taken reference of that only. Fan's Patriotism, Nostalgic relation with cricket, drama or craze over the game and its aftermath changes a person's behaviour towards watching one day cricket. IPL is a 20-20 match. The behaviour of people according to these stated factors might vary. This paper provides chance for that [5].

The gender and sexual orientation of a person can affect the behaviour to the sports. It might be the case in IPL as well. So from this paper we have read how Masculinity affects a fan behaviour and from a cultural passion cricket could become national obsession. We have taken into account fan Behaviour of people of Bangladesh and their obsession with any particular IPL team. From this we can analyse the behaviour that IPL in inducing in people worldwide because most of the franchises take overseas players [6].

IPL has an effect to the social environment. We have seen malpractices like betting, match fixing as well. Effect of IPL on crime or fan behaviour coming out as a crime is not what is desired. Here from this paper this side is taken into account which we can relate. Increase in crimes from 1990=2016 with an alarming rate as the craze over any mega sport event increases [7].

The IPL is carried out in the different cities of India, in major cities like Mumbai, Eden Gardens: Kolkata, Mohali and all other large metropolitan city. Fans tend to travel to these stadiums to witness live matches. The migration for few days especially during match time causes traffic to increase. This paper talks about Alternative Traffic management strategies to overwhelm the negative impacts of conduction of a big sport event in a densely populated city of India. The paper says that IPL spectator's patience altered after being

struck in a Traffic Jam while going to watch a match. So again the attitude changing is associated with respect to IPL [8].

The national game for India is Hockey then how cricket is most loved? How it generates so much cash? 9 inferences like ease of playing, better infrastructure, brand value, physical quotient, world class cricketers, strong governing body, sponsors, advertisement and IPL craze has made Cricket the most loved sport in India. From this paper we can further see that which game in particular like one day T20 or test match is most popular and why [9].

Covid-19 Pandemic has put the OTT platforms as saviour to boredom as well as IPL has been made the eye candy. Wherever you are you can have a glance at the match starting from 7.30 PM on hot star. Studies by Earnet and Young say that hotstar is the most popular OTT platform in India due to its reach to almost all the TV daily soaps. Every day during this IPL time there are over 60 lac spectators watching IPL through Hotstar Live holding either a VIP or Premium subscription. This paper talks about 62 % growth in IPL digital viewership and craze over hotstar. But there is malpractices present here too. Online Piracy declining sale of Live Tickets and affecting economy [10]

We all know that a worldwide emergency has occurred due to the pandemic that has happened named as COVID 19. The mega event in cricket named IPL that is conducted every year was postponed but finally BCCI has decided to conduct it in Abu Dhabi. The superb stadium with fabulous facility promotes the positive side of this Middle East country. Many visitors are wishing to travel and waiting for a chance. A major advantage of IPL is it promotes tourism. This paper talks about UAE and the sports tourism. Sports events have become an instrument for host countries to use to brand their destination. The United Arab Emirates (UAE) which is recognized as the fastest growing tourism hot spot with a growth rate of 10.4% in 2013 is combining sport and tourism to boost its economy and improve its already superb brand image. Sports events hosting in country will increase domestic brand recognition more [11].

The result shows that the core product of quality dimensions of the team characteristics and player performance are related significantly to the negative emotions of the anxiety and both positive emotions of excitement and emotions. How in cricket positive and negative emotions of a spectators are directly related to intentions [12].

We have seen researchers to determine whether consumers to form some intention to buy product or services produced by IPL. The survey was conducted in PCA cricket stadium. We can continue the study further to assess the effects of sport sponsorship on consumer buying intention [13].

This study reveal that bowler's prior economy rate and the height have influenced the performance significantly, while the handedness and the bowling style have not shown a statistical significance on the performance. The study is on format of cricket and this study is to identify the bowler characteristics which impact bowlers' performance [14].

From this paper we have read about the global processes, there was a tangible shift in the cultural economy of sports from the developed nations of the west to the developing nations. We can further study how the globalization of sports impact the cricket and the role of cricket format [15].

Hiremath, G., Venkatesh, H. and choudhury, M. (2019) find that the team winning the IPL tittle in a season has positive impact on the returns of the sponsor stock of a particular team whereas loss of the team has a negative impact on return. The present investigation is first of kind to test whether the performance of the IPL cricket team can influence stock returns of sponsor [16].

Here Purohit, H. (2014) brought an insight to how with IPL gaining ground in India and tourist momentum on a rise there is a need to analyse the attitude of NRI based in Middle East. Analysis of different factors of spectators can be analysed easily [17].

The article focus on the two thing one is mappings sponsorship and other is impact of micro level factors on sponsorship linked marketing. Knowledge of the academicians who will able to understand the potential of future research that could be done further [18].

The stadium atmosphere scales developed in this study demonstrate sound psychometric properties based on various rability and validity test. The stadium atmosphere scale developed will be of particular use for sports marketers and management [19].

Souvik, N. (2015) focuses on the case of Kolkata Knight Riders that fans are attached not just to their local icons but also local sports grounds. From here fan behaviour can be studied as in how local stars and grounds impact the different teams in Indian premier league [20].

This paper is particularly written on the experience of the spectators after IPL launched the Virtual reality option for their spectators. The spectators have a very positive response for the newly launched Virtual Reality option as they have a more immersive experience. Spectators can have 360-degree view of the whole field setup with improved graphics. The paper primarily focuses on the interactivity of the spectator, while watching IPL matches in the augmented reality or on the OTT platforms. After reviewing this research paper, we can have an insight of the spectator's priorities shift in accordance to the technological advancements like OTT platforms or VR for watching an IPL game. [21]

In this paper, the analytical research has been done over the trend of Over The Top (OTT) platforms in Indian market, and what affect do the sports leagues like IPL or FIFA had on the growth of the users in the case of OTT platforms. Initially OTT platforms had an image of an expensive source of platforms. But with passage of time, Indian Spectators have started opting OTT platforms as their prime source of the entertainment. During IPL 2019 there were 300 million active users who viewed the IPL on OTT platforms. Through the information we gathered from the paper, we can research on the how IPL has helped OTT platforms to gain more number of subscribers especially in the year of 2020. [22]

This paper revolves around the topic, how OTT could match the quality of live broadcast. As the there are certain limitations in the case of using OTT platforms over live broadcasts, especially in the case of sports leagues. Spectators feel annoyed when they experience the lag of 20-30 seconds as compared to the live broadcasts. This issue was notice during the FIFIA 2018 world cup and 2019 IPL. Along with this, another issue of low picture quality on TV also persists. The paper has also recommended some solutions like artificial intelligence, and low-latency common media application format (CMAF). Further research can be done how sites streaming the sports leagues can optimize their website, so that spectators do not have to experience such issue. [23]

In this research paper, the detailed research has been done on what basis millennials choose OTT platforms. The research shows that the factors like Convenience, mobility, content and subscription strategies. It has been found that OTT platforms with easy subscription plan tend to have more number of users, in some cases like Netflix, content factor overpowers the subscription factor. Further research can be done that how to design cheap but profitable subscription plans particularly for the IPL season, to gain more spectators. [24]

This research paper revolves around how millennials are driving changes in the sports industry in the modern India. It has been seen that millennials have driven the industry of sports in new way. Due to difference in the pattern of viewership, the most prominent change was brought by IPL they made their live streaming available at hotstar at cheap rates. Due to cheap and reasonable rates a huge increase in spectators of IPL on OTT platform has been noticed. We can further research on how can millennial spectator's experience can be enhanced on OTT platforms while watching IPL. [25]

In this paper, the research is done on online piracy of live sports telecast in India. The research shows that the rate of online piracy of live sports leagues like IPL is increasing day by day, due to increase in number of smartphone users and cheap tariff plans. As in the year of 2017, it is recorded that there were approximately 117 websites which were illegally live streaming the IPL tournaments which has resulted a notable loss in the number of spectators. The paper has concluded that a strict law should be made to counter the online piracy. Further research can be done on how to counter the new cases seen in 2020 like online piracy of live IPL matches on Facebook and Instagram Live from personal public accounts, as they are very difficult to track, hence resulting in notable loss in viewership of IPL matches on OTT platforms. [26]

This paper has worked on the effects of OTT platforms on developing spectators from overseas. They have researched on English Premier League's fan in Singapore. The results have shown that through OTT platforms various sports Leagues not only getting Spectators from the overseas but few OTT platform's strategies have also increased its spectator's travel intentions. As the studies have shown that sports tourism can be very fruitful, as it can generate a lot of revenue for the hosting region. We can further take this research towards the direction of designing some strategies for OTT platforms like Hotstar to inculcate viewership from the overseas. [27]

In this paper, the precise research has been done on the inter related factors affecting the possibility of a customer buying the subscription of an OTT platform in the year of 2020. Through various experiments conducted, flexibility, content, variety and social status are the factors according to the paper, which are mainly responsible for influencing a customer's will to buy the subscription of an OTT platform. We can study these factors and their effects and further, we can research on how we can satisfy all these factors efficiently in order to gain more spectators for IPL viewership on OTT platforms. [28]

This paper contains a detailed research based on how sports leagues like IPL are getting successful in developing sports market like India. There are various reasons or factors responsible for the success of sports leagues in India. After the analysis of the data collected from the sports, financial and operations experts, the success of the sports can be summarised into two broad categories, operational factors like

league-federation relationship, scheduling and infrastructure and fan acceptability factors like marketing communications and match-day experience. As sports leagues like IPL or Pro-Kabaddi were able to satisfy the above-mentioned factors, so they were able generate enormous amount of revenue. Further research can be done on the different revenue model of sports leagues like IPL in India. [29]

In this paper, the research has been done on the, sustainability of IPL financial revenue strategies. Some issues like match fixing, hiding of profits generated figures by franchise owners and variations in demand from the audience side has resulted into reduction of the revenue generated from advertisements and other sources. In the paper IPL revenue model has been divided into two categories, central streams that are franchise owners cost paid to BCCI and other rights revenue and the other is de-central streams which are various sponsors like Pepsi, DLF etc. Though it is a robust model but somewhere it is lacking to generate enough profits margins to sustain the League for the longer time. In recommendations, IPL should have a specialised dedicated team to keep check on all types of accounts and financial statements. We can further research on what more should be added to revenue model of IPL to make it more affective. [30]

This paper has detailed research on measuring the performances of teams in Indian sports leagues like IPL, and also found a relation between the performance of the team in IPL and revenue generated by the same. The paper shows that if an IPL team does not perform well on the field and it has been seen that the revenue generated also declines off the field accordingly. We can further research on how to make revenue generated by an IPL team or any other Indian sports Leagues Team, less dependent on the on-field performance of the same team. [31]

In this paper, the research has been done on the relation of ROI (return of investment) and investment appraisal. The research shows that in sports leagues like PSL of Pakistan, the investment appraisal was not even considered by PCB as PSL was not able generate great ROI in its initial phase, but later it has been seen that the returns started varying due to the franchise popularity, hence investment appraisal was also considered thereafter. Further research can be done on how to make Indian franchises of different sports leagues like Pro-kabaddi, IPL etc so that investors get motivated to invest more in the leagues. [32]

This paper has a detailed research on the emergence of sports market in India. India has grabbed attentions of many from the overseas, one of the prime reasons is its rapidly growing sports industry. But India is facing trouble in managing and administrative issue. The research shows the lack of professional management in the case of sports industry of India. Due to these reasons the factor of mismanagement of monetary funds related to sports events and leagues also comes into the picture. And together all these issues are hampering the growth of sports market in India. We can further research on the ways to overcome the management and administrative issues in a more efficient and cheaper way because at the end any league or sports event want to end up with good profit margins. [33]

Research Methodology

A total of 33 electronic databases related to Indian Premier League and the behavioral Intentions of spectators were analyzed. The electronic databases comprised of various Published Journals, Published Research Articles, and Few Book's related Chapters. We have searched all the mentioned databases from google scholar. The data from databases used were analyzed through various techniques in accordance to type of data. Few of the journals were having random research samples from which most were from secondary sources like Bibliography, Literature Reviews and Book References. Some of the papers, Quantitative Methodology has been used for Primary data in the form of Questionnaire, which then turned into papers and Qualitative Methodology has been used for Secondary data. In the data, where the objective is to find a new formula for the better and efficient results, Theory Building Analysis Technique has been used and in the papers where the main aim was to develop conclusion, The Exploratory Analysis Technique has been used. After all the Analysis Part we have dug out the Findings for the respective researched papers and noted it down. We have used the findings to fill the research gaps, i.e. How these conclusions, results or finding can be used for the further studies and researches and for the betterment of different organizations, firms and various sports leagues.

The entire process of collecting information and analysis is done step by step.

1. Preparation of questionnaire:

Questionnaires are really important in order to collect primary data for a particular research. In our research of the changing behavior and attitudes of IPL spectators as there were no research carried out before, so secondary data was not available. We collected the views of people of different age groups across the country on various parameters set manually by us.

Due to the emergency situation in the country because of Covid-19, the manual query of questionnaire was not possible. We have made a Google form containing 20 questions i.e., multiple choice questions, either a binary question having Yes or No or question in 5 point Likert Scale.

2. Sample Size:

The sample size of this research is 207 though we have targeted more how much we could do through filling online form. The pandemic situation is on and it's not manually possible to conduct a survey. The sample belongs to specifically to the country India. People from all across the country were sent the questionnaire over internet and the people are of varying profession and varying age.

There were age groups of 18-25, 25-35, 35-50 and 50 and above. Gender was either male or female. Several questions related to the watching behavior of them were noted. We also checked whether their marital status had any effect on the behavior of the spectators.

3. Instrument :

Statistical instrument to analyze the behavior and carry out the exact research we want to. The best suited tool to this is SPSS , R programming and Python. All of them analyze the data and visualize the data and its dependency in a very user friendly way. Taking care of all the pros and cons of every other statistical tool and ease of analysis, R language is used to perform Exploratory factor analysis. Earlier to performing EFA on a syntactical tool, Exploratory Data Analysis was performed importing data into python.

Firstly, the data was analyzed and then the visualization was done in Python taking seven factors all together.

```
[2] #show data description
data.describe()
```

	Repeat Telecast	Increased OTT Spectators after Covid-19	Pandemic Effect	Impact of Foreign Host	Active Spectator	Missing Stadium?	fandom after Covid-19	Gender Psychology	Womens preference to OTT	Price Sensitivity for Tickets	BCCI's Efficiency	Betting platforms' Effect	Fantasy Leagues' Effect	Perception amongst fans' for Stadium as against OTT
count	206.000000	206.000000	206.000000	206.000000	206.000000	206.000000	206.000000	206.000000	206.000000	206.000000	206.000000	206.000000	206.000000	206.000000
mean	3.334951	3.354369	2.922330	3.223301	3.257282	3.261553	3.330097	3.150485	3.310680	2.927184	3.456311	3.364078	3.155340	3.378641
std	1.164282	1.089039	1.211243	1.025833	1.150533	1.159625	1.030163	1.173560	1.012402	1.291450	0.965520	1.129848	1.119732	1.161299
min	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
25%	3.000000	3.000000	2.000000	3.000000	3.000000	3.000000	3.000000	2.000000	3.000000	2.000000	3.000000	3.000000	3.000000	3.000000
50%	3.000000	4.000000	3.000000	3.000000	3.000000	3.000000	3.000000	3.000000	3.000000	3.000000	4.000000	4.000000	3.000000	3.000000
75%	4.000000	4.000000	4.000000	4.000000	4.000000	4.000000	4.000000	4.000000	4.000000	4.000000	4.000000	4.000000	4.000000	4.000000
max	5.000000	5.000000	5.000000	5.000000	5.000000	5.000000	5.000000	5.000000	5.000000	5.000000	5.000000	5.000000	5.000000	5.000000

Figure 1 : Data Description

Results and Discussion

The visualization was done statistically with the help of graphs of relating each factor with the other and then correlation matrix is visualized in Heat Map for a clear understanding.

Exploratory Data Analysis (EDA) is used to answer questions, test business assumptions, generate hypothesis for further analysis. Here we have described the data, visualized the pattern, and statistically visualized the data correlated with each other taking seven factors altogether namely: 'Repeat Telecast','Increased OTT Spectators after Covid-19','Pandemic Effect ','Impact of Foreign Host','Active Spectator','Missing Stadium?','fandom after Covid-19'.

<seaborn.axisgrid.PairGrid at 0x7f71ddaeb6a0>

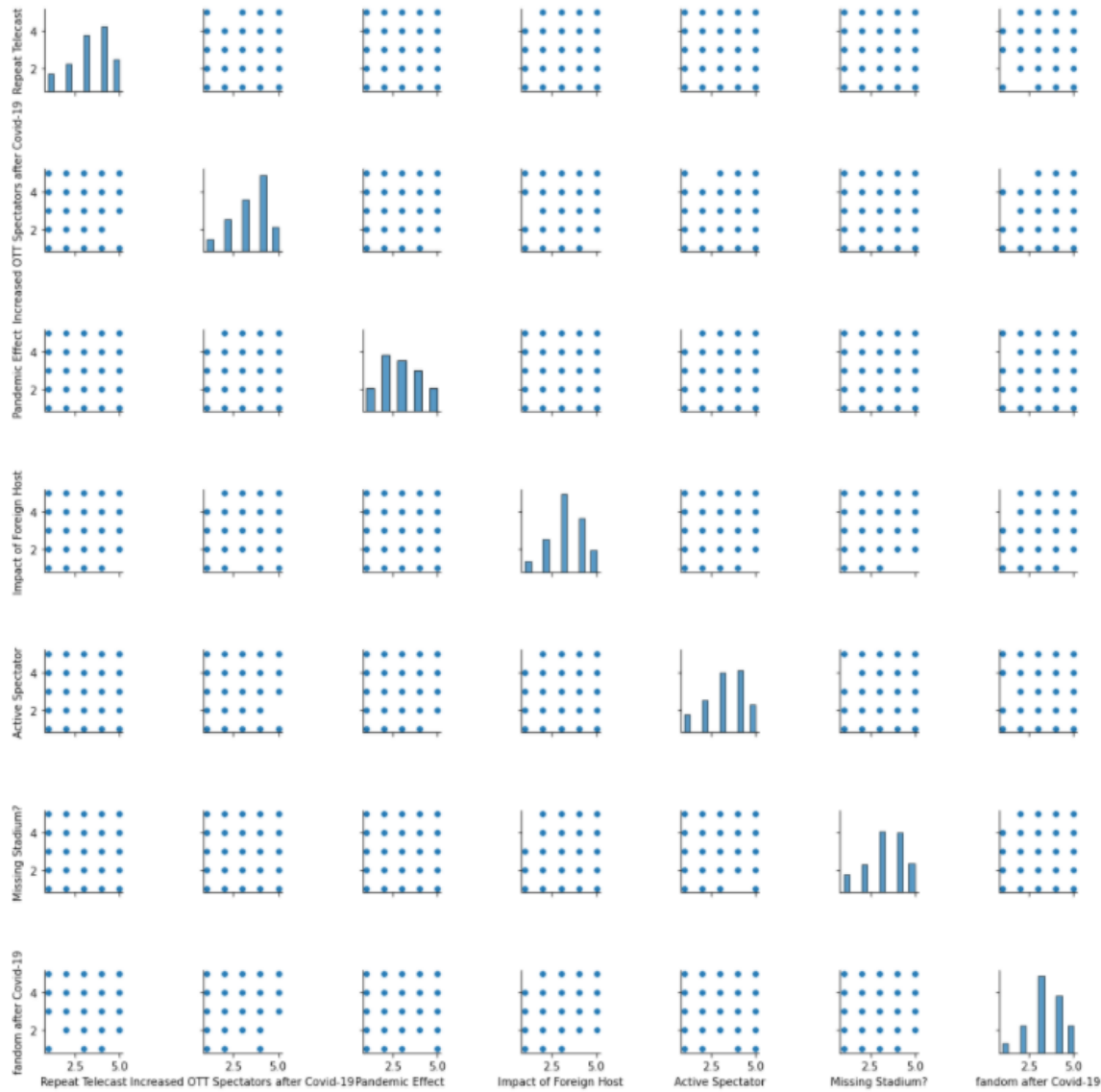


Figure 2: Exploratory data analysis

We can see the diagonal correlation to be 1, and the visualization graph accordingly.

Pairplot was done on all the rows but on seven chosen factors or columns. Size of the plot is kept as 2, for better visualization. Now heatmap is one of the features of machine learning, where a correlation matrix is visualized with different color shades for any layman to understand that where the correlation is more and where it is less.

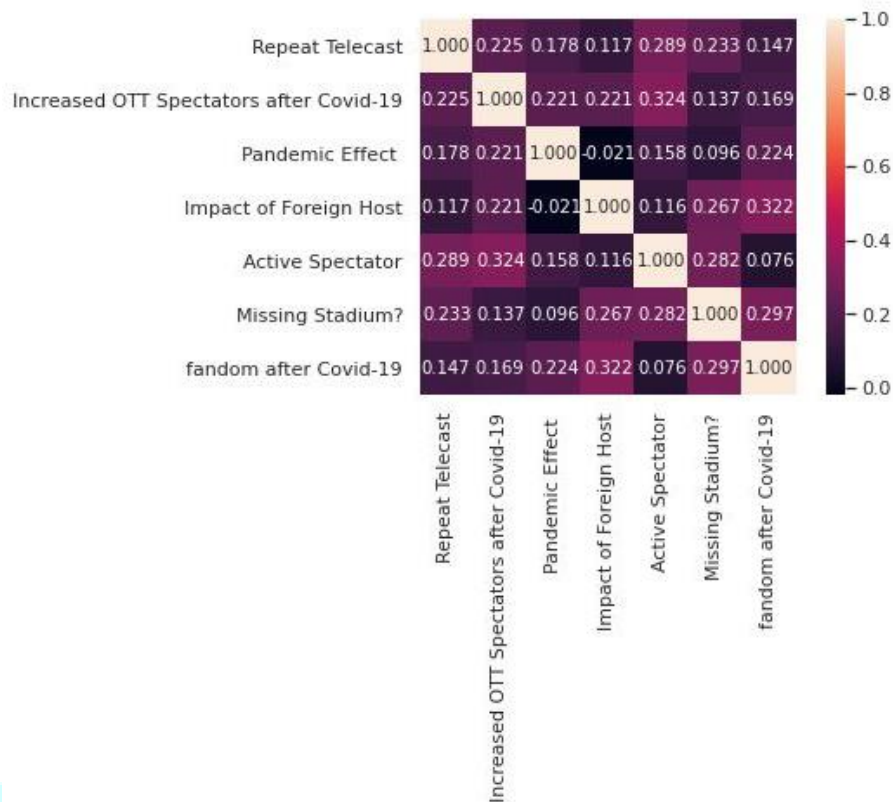


Figure 3: Heat Map of correlation matrix

After the visualization in Python, Exploratory factor analysis was performed. Exploratory Factor Analysis is the procedure, where data is broken into subsets or smaller sets and summary of variables and the people who have responded are correlated and a result is obtained. The respondents have answered a questionnaire containing a set of questions answered in likert scale where 1 is strongly disagree and 5 being the highest rating of Strongly agree. The results are obtained in a documented format in R as below:

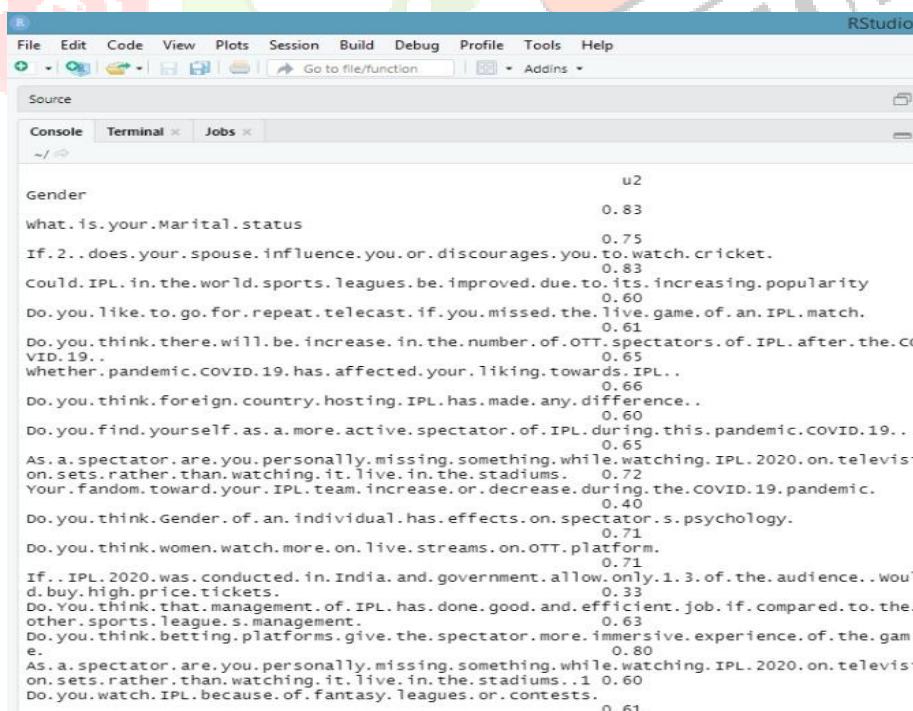


Figure 5.3: EFA results

```

fitting in the stadium.. 1.4
Do you prefer OTT over live broadcast on television sets. 2.1

SS loadings
MR1 MR5 MR4 MR2 MR3 MR6
1.66 1.27 1.22 1.06 1.08 0.72
Proportion Var 0.08 0.06 0.06 0.05 0.05 0.04
Cumulative Var 0.08 0.15 0.21 0.26 0.31 0.35
Proportion Explained 0.24 0.18 0.17 0.15 0.15 0.10
Cumulative Proportion 0.24 0.42 0.59 0.74 0.90 1.00

with factor correlations of
MR1 MR5 MR4 MR2 MR3 MR6
MR1 1.00 0.30 0.33 0.19 0.23 0.17
MR5 0.30 1.00 0.24 -0.03 0.28 0.24
MR4 0.33 0.24 1.00 -0.02 0.14 0.19
MR2 0.19 -0.03 -0.02 1.00 0.19 -0.08
MR3 0.23 0.28 0.14 0.19 1.00 0.12
MR6 0.17 0.24 0.19 -0.08 0.12 1.00

Mean item complexity = 2.3
Test of the hypothesis that 6 factors are sufficient.

The degrees of freedom for the null model are 190 and the objective function was 3.69
The degrees of freedom for the model are 85 and the objective function was 0.56

The root mean square of the residuals (RMSR) is 0.04
The df corrected root mean square of the residuals is 0.05

Fit based upon off diagonal values = 0.96
Measures of factor score adequacy
MR1 MR5 MR4 MR2 MR3 MR6
Correlation of (regression) scores with factors 0.84 0.84 0.86 0.78 0.79 0.72
Multiple R square of scores with factors 0.71 0.70 0.74 0.61 0.62 0.52
Minimum correlation of possible factor scores 0.42 0.41 0.48 0.23 0.23 0.04
>

```

Figure 4: EFA elaborated

After performing exploratory factor analysis, Eigen Value is calculated, and then communality and uniqueness is calculated as follows:

```

Stadium vs Broadcast 0.35119714
Effect of Fantasy Leagues 0.75643099
Change of view in Stadium vs OTT 0.31213460
OTT vs TV broadcasting 0.40100014

. eigenv_fac1 = sum(loadings_fac1^2) #SS of factor loadings
. eigenv_fac1
[1] 2.54725

# Calculate communality
loadings_E1 = EFAresult$loadings[1,] #loadings for first variable (1st row of Lambda)
loadings_E1
Factor1 Factor2 Factor3 Factor4 Factor5 Factor6
0.089237996 -0.053199418 -0.172797702 -0.003102401 0.238396042 -0.150514090
communality_E1 = sum(loadings_E1^2) #SS of factor loadings
communality_E1
[1] 0.1201494
# Calculate uniqueness
uniqueness_E1 = 1-communality_E1
uniqueness_E1
[1] 0.8798506

```

Figure 5: Eigen value, Communality and Uniqueness of data

The results are described as follows:

Eigen value calculated for the exploratory factor analysis is found out to be: 2.547

Communality and uniqueness of the factors are the two sides of coin where,

Communality= 1- uniqueness.

The calculated values for the same are 0.12 and 0.879, respectively.

After performing several statistical and syntactical analysis techniques, we can summarize the result as:

Active Spectators and the people who miss stadium due to pandemic are keener to watch the repeat telecast.

Active spectators and the people who have an interest in watching repeat telecast have a positive and better view on OTT platforms showcasing IPL during and after this pandemic.

Pandemic has resulted in increased number of OTT spectators and fandom of the people watching the game irrespective of gender.

The foreign host i.e., decision of IPL 2020 being held in UAE has resulted in increased OTT spectators and people missed watching in stadium.

The active spectators watch repeat telecast, use OTT platform and do miss watching in stadium and pandemic could barely affect their activeness.

The fandom after the pandemic Covid-19, has been inferred from people missing the feel of watching from stadium as for the first time in the history of IPL, it was held in a foreign country with proper covid restrictions, new set of rules by BCCI and no spectators allowed.

Conclusion:

Restate thesis statement behavioral intentions and attitude of IPL spectators depends on various factors. We have studied a lot of research paper which include domestic as well as foreign behavioral intentions and attitude of spectators in which we examine the relationship among the core product quality, team characteristics, player performance but the most important thing how the spectator emotions like anxiety, dejection, and happiness depends on the team which they are supporting. The renowned team Royal challenger Bangalore which is only known for the dominating player like Virat Kohli, Ab de Villiers but unfortunately they lost every time in Indian premier league but they have a huge fan following across the nation and worldwide also whether they win or lose the match but their fan still supports them and lot of companies and the renowned brand also sponsor them because of they have a brand face like Virat Kohli. Franchises like Kolkata Knight Riders in Indian premier league also known for the brand face that is Shah Rukh Khan. Spectators buy different products that are sponsored by Kolkata Knight Riders and fans are emotionally attached to the teams. As we studied the papers player performance, spectator behavior, although it is positive or negative, depends on the team performance. It also provides useful information for sports marketing executives, suggesting that they strive for unique organizational advantages and employ them in their marketing messages when their team is unsuccessful. Sports sponsorship has been used in India for the marketing purpose of a different brand for many years. Another factor is stock prices of firms also depend on the winner or losing of the team. The team wins Indian premier league title in a

season has a positive impact on the returns of the sponsor stock of particular team whereas loss of team negative impact on return.

After conducting statistical analysis and survey we conclude that male and female have equal perception and love for cricket in India and their reaction for Indian Premiere League is not distinctive. They are taking similar efforts and this is appreciated in the diversified country from all the strata of society and every nook of the country. The fandom after the pandemic Covid 19, has been inferred from people missing the feel of watching from stadium as for the first time in the history of IPL, it was held in a foreign country with proper covid restrictions, new set of rules by BCCI and no spectators allowed. There has been an increase in OTT platforms like Hotstar who telecasted the match in live. People during this pandemic took to social networking sites to thank Mr. Sourav Ganguly, President of BCCI who took this initiative to conduct the IPL in foreign country to give a ray of entertainment during stressful situation of pandemic. The fans kept on showing their fandom, loyalty and love towards their team and kept supporting them virtually. This are the beauty of IPL, one of the most popular leagues of all time so far.

References:

Yongwanichkultana, S. (2019). 'Comparison of Behavior between Sexual Minority and Heterosexual Sport Spectator in Thailand' (Doctoral dissertation, 서울대학교 대학원).

Kour, P. (2019). 'Sports events and development of local economy': A case study of IPL match in Mohali.

Singh, A., & Sharma, R. (2019). 'Why Do They Associate With Sports Teams: Identification Of Factors Influencing Individuals' Adoption Behaviour'. *Our Heritage*, 67(10), 264-276.

Arulmozhi, S. J., & Vinayagamoorthi, G. (2019). 'MARKETING SPORT TOURISM IN INDIA'. *Advance and Innovative Research*, 6(2), 23.

Kashif, M., Fernando, P. M. P., & Wijenayake, S. I. (2019). 'Blinded by the sand of its burrowing? Examining fans' intentions to follow one-day cricket on TV with a moderating effect of social influence'. *International Journal of Sports Marketing and Sponsorship*, 4(2), 138-153.

Hossain, A. (2019). 'Sexual nationalism, masculinity and the cultural politics of cricket in Bangladesh'. *South Asia: Journal of South Asian Studies*, 42(4), 638-653.

Andreff, W. (2019). 'An Economic Roadmap to the Dark Side of Sport: Volume II: Corruption in Sport. Springer Nature.

GHOSH, K., SINGH, N., & MAITRA, B. (2019). 'Traffic Management During a Big Sport Event': A Case Study in Kolkata City. *Journal of the Eastern Asia Society for Transportation Studies*, 13, 1873-1891.

Shitole, S., Pawar, V., Dhangar, M. D. T., Patil, K. B., Chaudhari, H., & Patil, G. (2019). National Conference.

Sharma, S. (2017). 'Online Piracy of Live Sports Telecasts in India. Marq'. *Sports L. Rev.*, 28, 433.

Prabhu,N.B,&subramanian,k.(2015). 'The impact of sports tourism on the UAE: A case

study of the Ipl’.

Foroughi, B., Nikibin, D., Hyun, S. and Iranmanesh, M. (2014). ‘Impact of core product quality on sport fans emotions and behavioural intentions’.

Singh, G., & Bhatia, A. (2013). ‘Effect of sports sponsorship on purchase intention of spectators’. A case study of the Ipl season 5. *Asian journal of research in business economics and management*.

Wickramasinghe, I. (2013). ‘Bowlers performance in 2013 champion trophy’. *Annals of applied sports science*. 2(1),1-10

Mustafa, F.(2013). ‘Cricket and globalizatio'n: global processes and the imperial game’. *Journal of global history*, 8(2),318-341

Hiremath, G., Venkatesh, H. and choudhury, M. (2019). ‘Sports sentiment and behaviour of stock prices: A case of T-20 and Ipl cricket matches’.

Purohit, H. (2014). ‘Attitude of middle east based non resident Indians towards stadium service in India during Indian premier league cricket event 2013’. *Zeinth International journal of multidisciplinary research*. 4(1),1-8

Gupta, A., Naik, A. Y., & Arora. N. (2013) ‘Mapping sponsorship - linked marketing in Indian premier league’. *IIM Khozikhode society and management review*. 2(1). 61-72

Balaji, M. and Chakrabort, R. (2015). ‘Stadium atmosphere: scale development validation in Indian context’.

Souvik, N. (2015). ‘Home team versus local stars; franchises in Indian premier league’. *Economic and political weekly*, 50(20).

Patankar, S., & Mishra, M. Knocking the Ball Out of Television Sets and into the Living Rooms: The Rise of Immersive VR Experience in Indian Sports.

Sundaravel, E., & Elangovan, N. Emergence and future of Over-the-top (OTT) video services in India: an analytical research

Fautier, T. (2020). ‘How OTT Services Can Match the Quality of Broadcast. SMPTE’ *Motion Imaging Journal*, 129(3), 16-25.

Dasgupta, D., & Grover, D. (2019). ‘Understanding Adoption Factors of Over-the-Top Video Services Among Millennial Consumers’, *International Journal of Computer Engineering and Technology*, 10(1).

Sharma, S. (2017). ‘Online Piracy of Live Sports Telecasts in India’. *Marq. Sports L. Rev.*, 28, 433.

Cho, H., Chiu, W., & Tan, X. D. (2020). ‘Travel overseas for a game: the effect of nostalgia on satellite fans’ psychological commitment, subjective well-being, and travel intention’. *Current Issues in Tourism*, 1-17.

Saini, C. P., & Gupta, N. (2020). ‘Interrelated factors driving the purchase of over-the-top television subscription services: A study using exploratory factor analysis and the decision-making trial and evaluation laboratory method’. *Applied Marketing Analytics*, 6(1), 73-84.

Tripathi, S., & Kapoor, A. (2017). ‘What makes sports leagues successful? A study on Indian professional sports leagues’. *International Journal of Indian Culture and Business Management*, 15(2), 206-228.

Kadapa, S. (2013). 'How Sustainable is the Strategy of the Indian Premier League-IPL? A Critical Review of 10 Key Issues that Impact the IPL Strategy'. A critical review of, 10.

Singh, S. (2011). 'Measuring the performance of teams in the Indian Premier League'. *American Journal of Operations Research*, 1(3), 180.

Aftab, R., & Naveed, M. (2020). 'Investment review in sports leagues: financial evidence from Pakistan Super League. *Managerial Finance*'.

Singh, K. K., & Desalegn, T. (2019). 'CONTEMPORARY ISSUES AND CHALLENGES OF PROFESSIONAL AND AMATEUR SPORTS IN INDIA'. *European Journal of Physical Education and Sport Science*, 2(1).

