



Deeper Dive into the NBA during COVID-19

Data Science Division

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Abstract

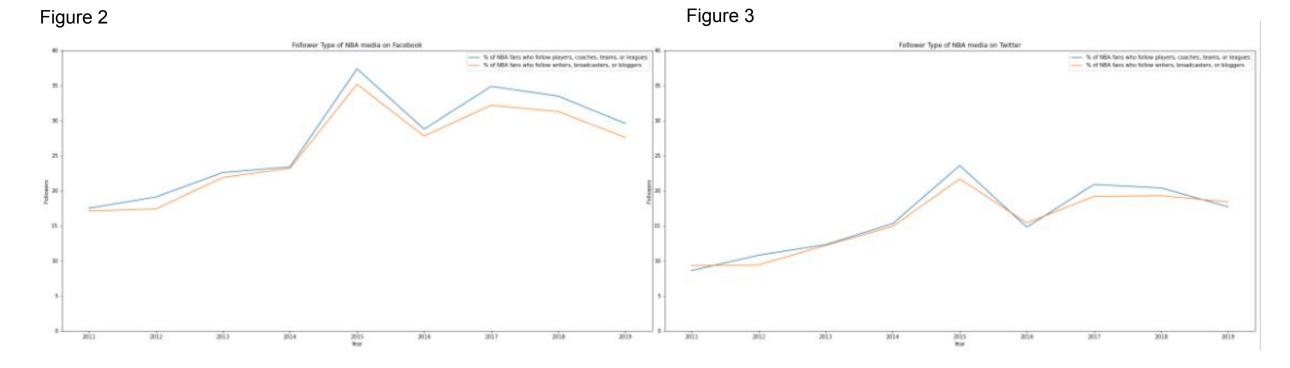
The business profits of the sports industry have been growing at an exponential rate over the course of the last 40 years. Modern forms of entertainment such as television networks, streaming services, grandiose stadiums, and pregame activities have led to an increase in consumer spending as well as profitability for all professional leagues. Constant information through forms of social media has allowed viewers to stay engaged in the premise of all sports, even in the off-season when analyzing and predicting team successes for the next season. Due to the Coronavirus pandemic this year, the sports industry has been disrupted since many sports seasons have been postponed and some sports have halted in-person viewings in stadiums. The following research project explores the sports industry while analyzing the pandemic's impact on large industries. In this research, we take a deep dive into the NBA and analyze their revenue data by observing various trends, patterns, and comparisons, specifically focusing on the way social media has been leveraged to increase audience engagement in the sports industry.

Research Question

We are in a pandemic that has affected our lives drastically, so we are interested in utilizing COVID-19 data to better understand the impact of remote operations on the sports industry revenue, specifically with the NBA. We also want to explore the role of social media when it comes to driving engagement in such a remote environment. The question we will be answering with our research is, *How has the sports industry been impacted by COVID and what role has social media played when it comes to NBA audience engagement as well as revenue?*

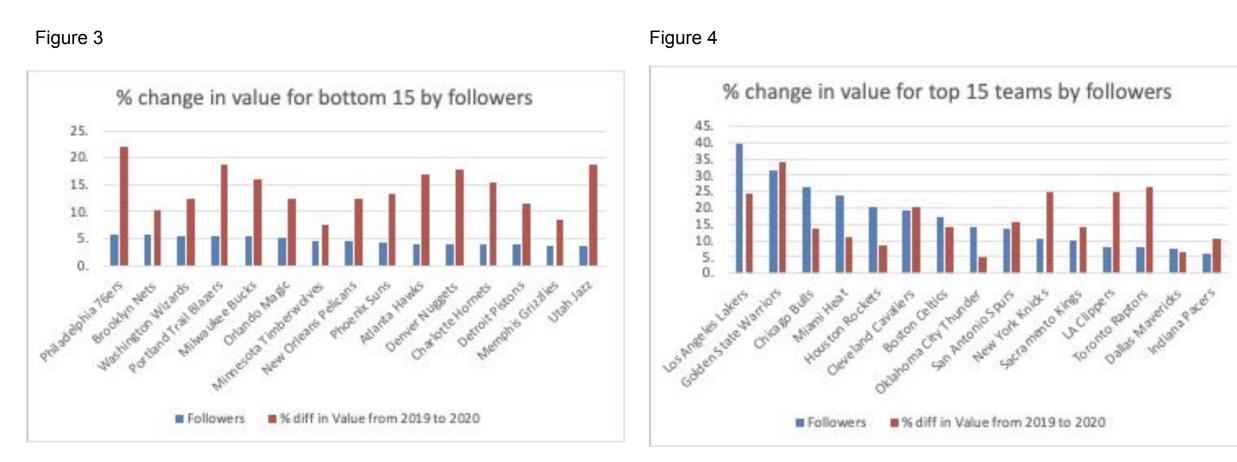
Approximating Social Media Sustainability

In general, social media impacts the value, income, and revenue of the franchise in the popular American sport. NBA teams grew in valuation post the pandemic and that the teams with the lowest social media following grew their followers and value at the same time. This shows that as people could not go to see their favourite teams play in the stadium they started following them on social media to keep in touch with the daily ongoings such as player interviews, training videos and other features. Maintaining strong social media presence and engagement with fans is a crucial step to alleviate the loss of revenue due to pandemic and other situations that obstruct the season.

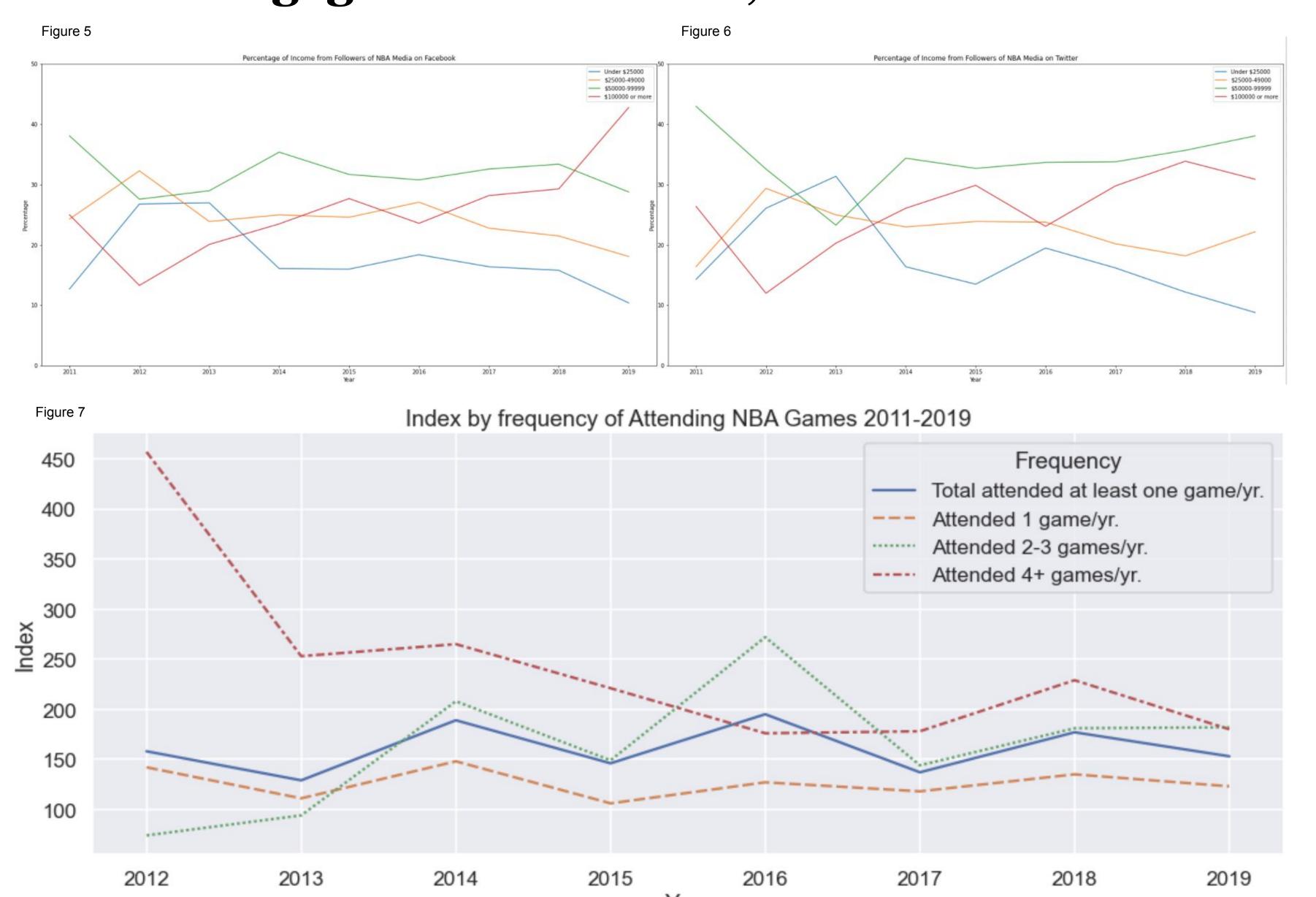


NBA Valuation & Revenue Analysis

In Figures 3 & 4, we see that all NBA teams grew in valuation post-pandemic and that the teams with the lowest social media following grew their followers and value at the same time. This shows that as people could not go to see their favorite teams play in the stadium they started following them on social media to keep in touch with the daily ongoings such as player interviews, training videos, and other features. Hence, social media is a clear contributor to growth in revenue. An example of this comes from a team such as the Golden State Warriors who were able to use their strong seasons in the NBA to market their move to San Francisco with social media. Maintaining a strong social media presence and engagement with fans is a crucial step to alleviate the loss of revenue due to pandemics and other situations that obstruct the season.



Online engagement increases; attendance decreases



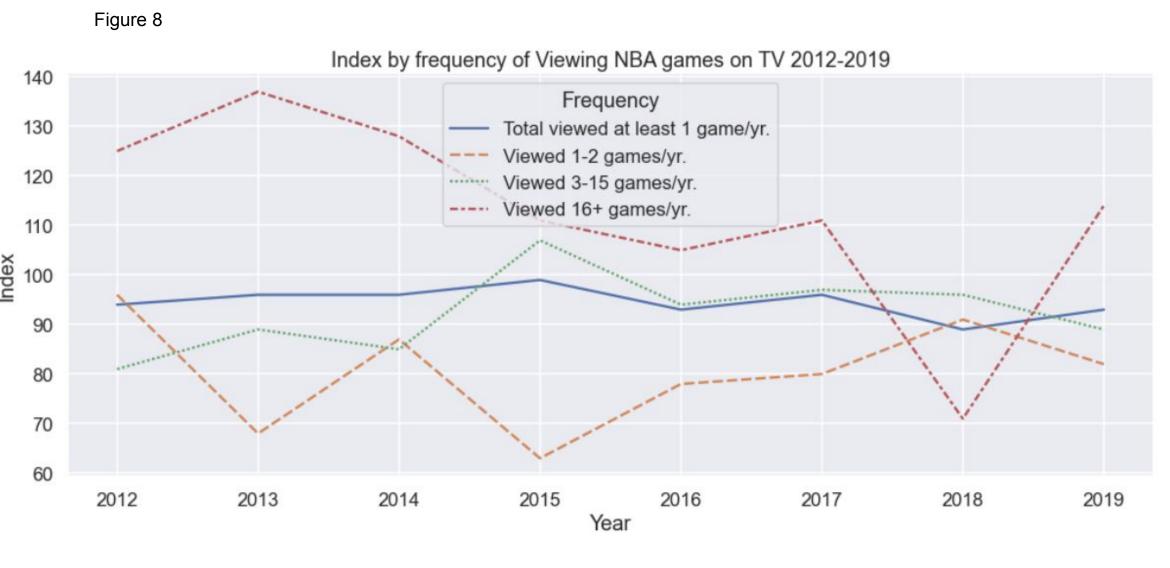
In the side-by-side plot of Figures 5 & 6, the plots represent the percentage of income from followers of the NBA media on Facebook and Twitter. Based on the line plot, although Facebook has seen some decrease in engagement, their percentage of income has overall increased from earlier years. In contrast, Twitter has seen some increase in most of their income percentages, thus, making Twitter a better platform to raise income from fans. Lastly, in Figure 8, we see that the in-person engagement/attendance with the NBA games has severely decreased in the past decade. As social media rises, we see a downfall in the frequency of in-person attendance at NBA games. The transition from in-person fan engagement to the reliance on social media is becoming very clear.

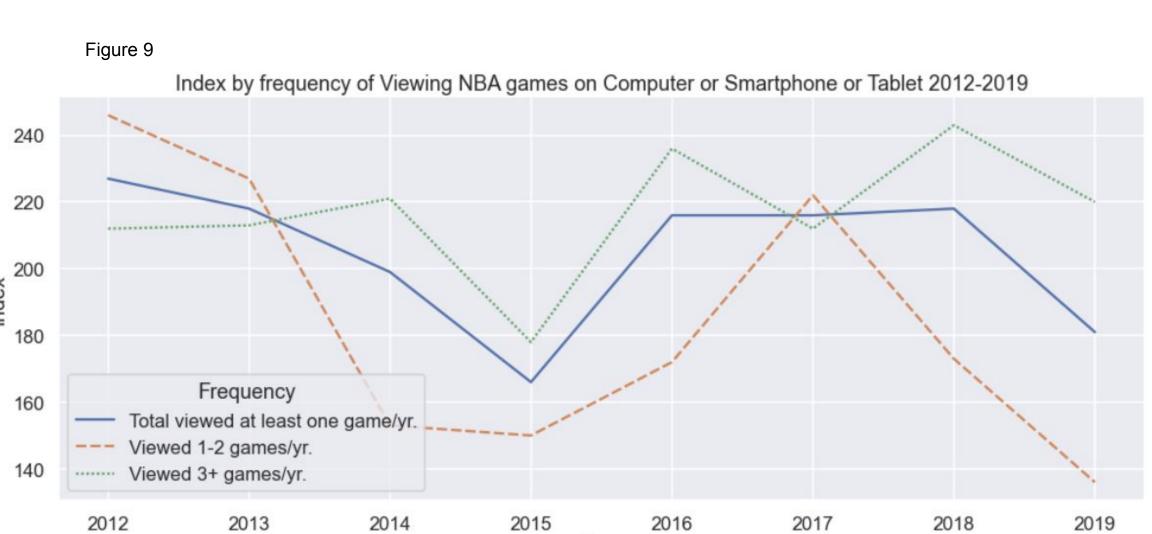
Frequency of Viewing Before Pandemic

In Figures 7 & 8, we analyze the frequency of people viewing the NBA on their engagement tools. In Figure 7, we see the engagement frequency for viewers watching games on television going down in a steep linear curve in 2018 and jumping back in 2019. A very plausible reason for this may be because more people started to watch their games off of television and on their smartphones and computers instead.

In Figure 8, we see that there is almost an inverse relationship between Figure 7 and 8. This can further prove our analysis that more people started to watch their NBA content on their portable devices.

In conclusion, using social media to keep the fans engaged throughout the pandemic is a valid solution that we should further pursue as we move into a remote lifestyle.





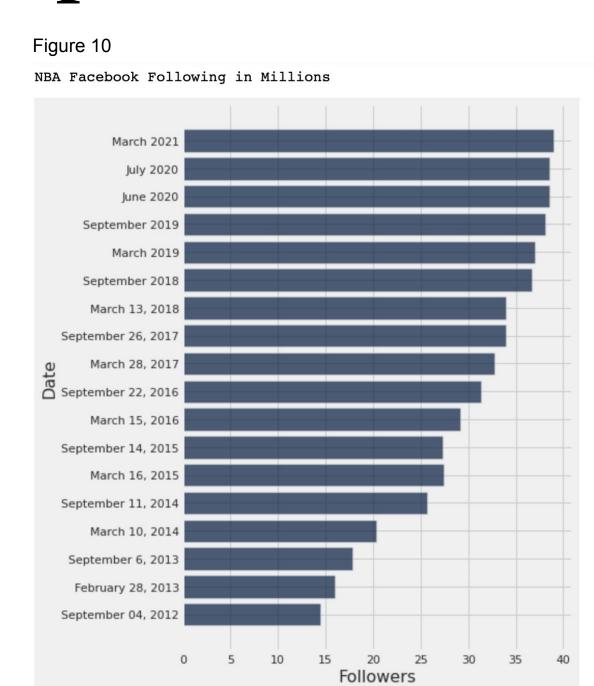
NBA Fan Demographic: Facebook

In figure 10, we see that the Facebook following of the NBA as a whole has increased since 2012. Specifically looking at the pandemic at the top 3 bars (March 2021, July 2020, and June 2020), we see that there is still growth during the pandemic.

Although we do not know how to have access to data between July and March 2021, we know that July 2020 was when the initial NBA bubble occurred. We also notice that there is not a large difference between the months of June and July. Fast forward to the present day, there is still growth for the NBA in terms of fan followership.

We can see that there is a big growth from March 2014 to September 2014. March is the time where the season starts to pick up in momentum since it approaches the finals around then.

In Figure 11, can see that the months of March across all of the data show a bit of increase or at least no decrease to its prior September month. Social media usage has grown a lot especially with the pandemic which could be a reason why followings have also grown at such a fast pace.





Conclusion & Future Work

Through this research, we have clearly understood the strong correlation between social media engagement and revenue growth when it comes to the NBA. Further analysis into how COVID-19 has influenced the NBA bubble will give us a better understanding of future projections that would occur under the circumstances that another disaster occurs. By understanding the projections given the timeline of the current disaster—COVID-19—we will be able to figure out how to negate certain problems that proved to be a feasible solution for the financial crisis that the NBA experienced. Doing this will allow the NBA to take early counter-measures to not only avoid such downfalls again but also increase their financial affluence.

References

"The Economic Impact of COVID-19 on US Sports." Emsi, 20 July 2020, www.economicmodeling.com/2020/05/28/the-economic-impact-of-covid-19-on-us sports-up-to-92-6k-lost-every-minute/.

Key contacts Pete Giorgio Principal | US Sports Practice Leader pgiorgio@deloitte.com . "Understanding COVID-19's Impact on the Sports Sector: Deloitte Global." Deloitte, 10 July 2020, www2.deloitte.com/global/en/pages/about-deloitte/articles/covid 19/understanding-COVID-19-s-impact-on-the-sports-sector.html.

"The Impact of COVID-19 on Sport, Physical Activity and Well-Being and Its Effects on Social Development | Department of Economic and Social Affairs." United Nations, United Nations, www.un.org/development/desa/dpad/publication/un-desa-policy-brief 73-the-impact-of-covid-19-on-sport-physical-activity-and-well-being-and-its-effects-on social-development/.

Written by Stefan Hall, Project Lead. "This Is How COVID-19 Is Affecting the World of Sports." World Economic Forum, www.weforum.org/agenda/2020/04/sports-covid19-coronavirus-excersise-specators-media-coverage/.

Gough, Christina. "Topic: Impact of the Coronavirus on Sport." Statista, www.statista.com/topics/6098/impact-of-the-coronavirus-on-sport/.

Therealcyberlord. "Coronavirus (COVID-19) Visualization & Prediction." Kaggle, 6 Dec. 2020, www.kaggle.com/therealcyberlord/coronavirus-covid-19-visualization prediction.

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