

An Analysis of the Next Generation of Home Video Game Consoles

10392665, 10684078, 10557474

Xbox Series X vs Playstation 5



Our Aims

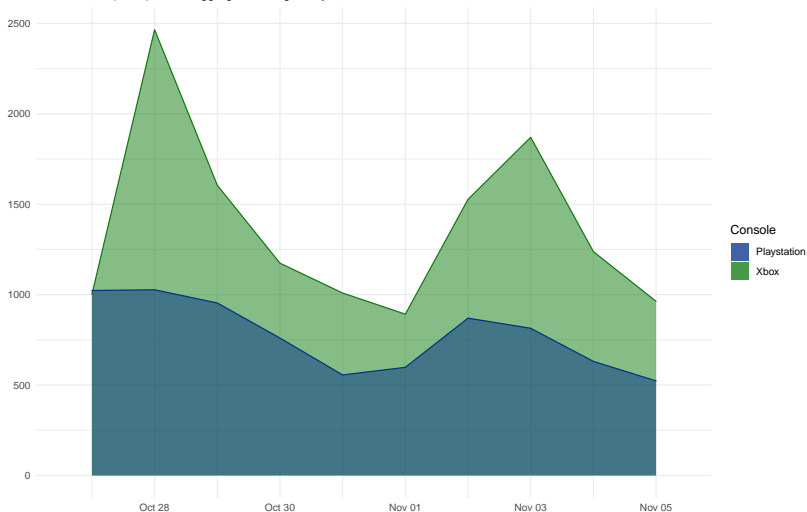
- ▶ Which console is going to have the more successful launch and the highest sales?
- ▶ What are the key factors that are going to influence a console purchase?
- ▶ What changes can we recommend to Sony/Microsoft to increase their respective shares of the market?

Background

- ▶ Home console market is a \$34 billion industry and is expected to grow to ~ \$52 billion by 2027.
- ▶ Microsoft and Sony have been engaged in direct competition since 2001.
- ▶ Differences between the platforms in previous generations have been large.
- ▶ Differences between the platforms in the newest generation have been minimised and services offered have been largely homogenized.

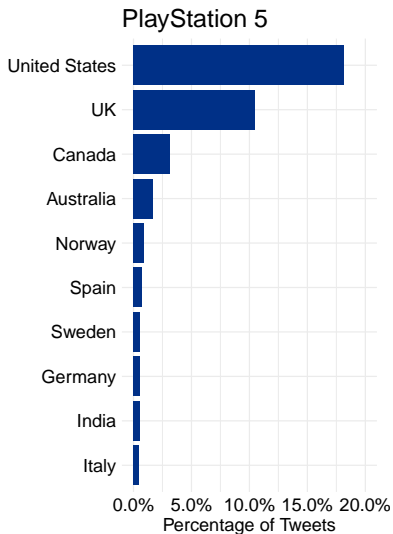
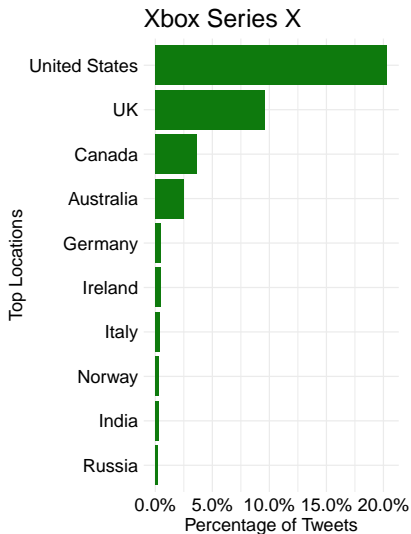
Frequency of Tweets Containing #XboxSeriesX and #Playstation5

Frequency of Tweets From #Xbox and #Playstation
Twitter status (tweet) counts aggregated using 1-days intervals



Source: Data collected from Twitter's REST API via rtweet

Tweets by Location



Source: Data collected from Twitter's REST API via rtweet

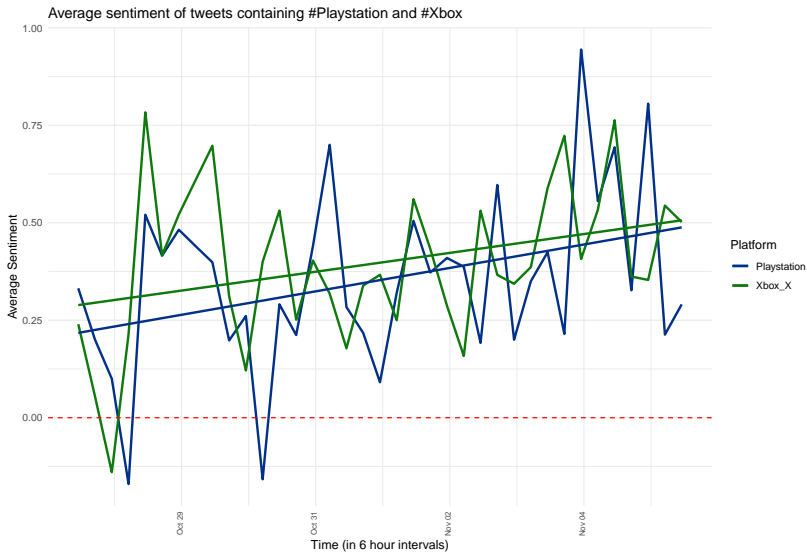
Sentiment Analysis of Tweets Containing #XboxSeriesX and #Playstation5

Table 1: Average Sentiments

Platform	Average Sentiment
Playstation	0.3542274
Xbox_X	0.4426994

The p.value of a t-test comparing Xbox and Playstation sentiment is: 0.0023723

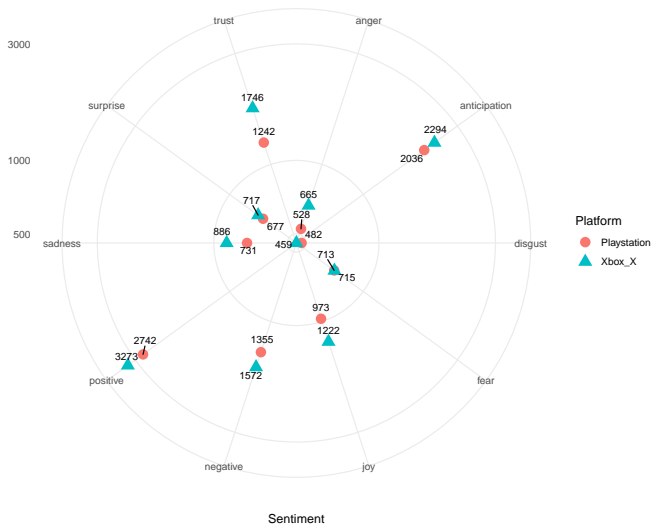
Sentiment Over Time



Source: Data collected from Twitter's REST API via rtweet

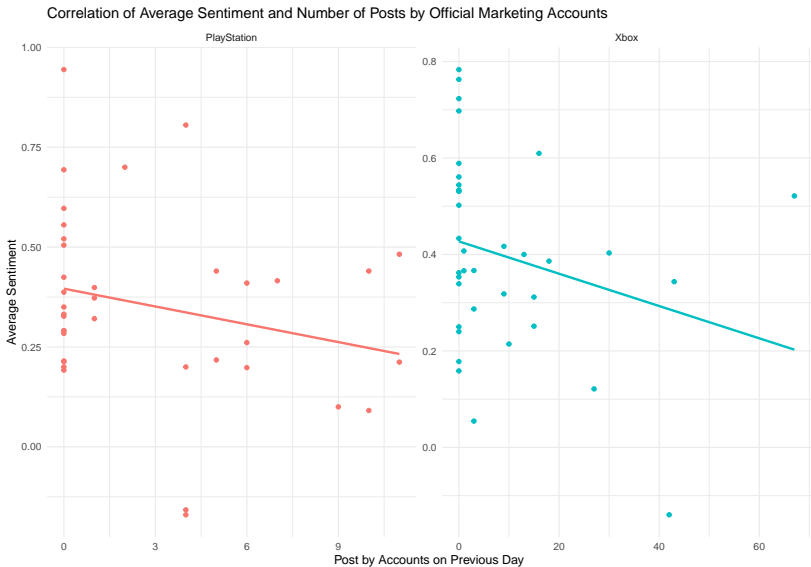
Emotional Sentiment

Assigns the sentiments of each tweet to an emotion



Source: Data collected from Twitter's REST API via rtweet

Correlation Between Marketing and Sentiment



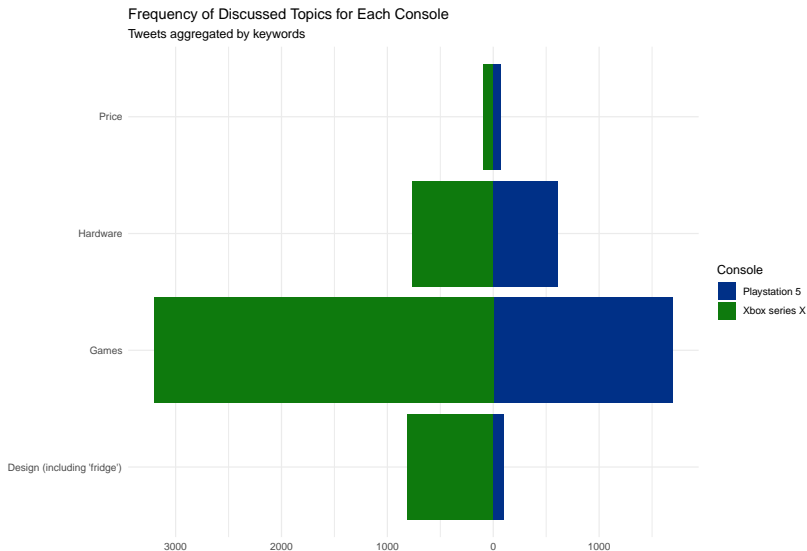
Wordcloud: #XboxSeriesX



Wordcloud: #Playstation5

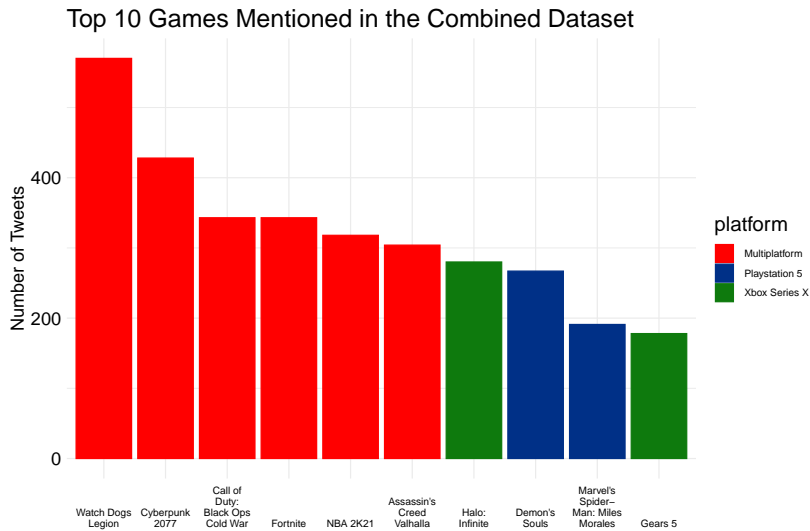


Volume of Tweets Containing Topic Keywords



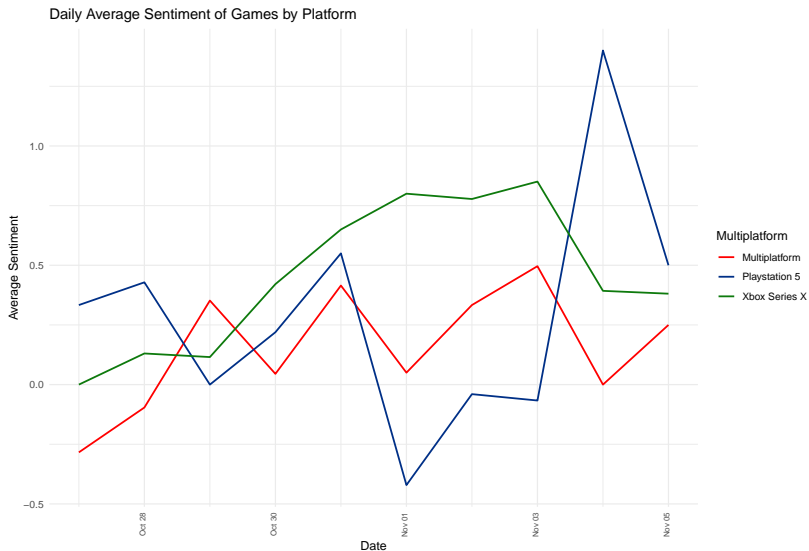
Source: Data collected from Twitter's REST API via rtweet

Most Discussed Games Within Tweet Data



Source: Data collected from Twitter's REST API via rtweet

Game Sentiment by Platform



Source: Data collected from Twitter's REST API via rtweet

Games With Significant Difference in Average Sentiment

	p.adj
game.Cyberpunk 2077-Assassin's Creed Valhalla	0.0000068
game.Cyberpunk 2077-Call of Duty: Black Ops Cold War	0.0149662
game.Gears 5-Call of Duty: Black Ops Cold War	0.0092674
game.Fortnite-Cyberpunk 2077	0.0000002
game.Gears 5-Cyberpunk 2077	0.0000000
game.Halo: Infinite-Cyberpunk 2077	0.0000011
game.Marvel's Spider-Man: Miles Morales-Cyberpunk 2077	0.0000600
game.NBA 2K21-Cyberpunk 2077	0.0019925
game.Watch Dogs Legion-Cyberpunk 2077	0.0000000
game.Gears 5-Demon's Souls	0.0017241

Conclusions

- ▶ Our data suggests that Xbox is likely to have a more successful launch.
- ▶ Games will have the largest influence on the success of the console this generation over other factors that dominated discussion in previous generations.
- ▶ Sony must keep pace with Microsoft in offering enticing exclusive intellectual properties and would possibly benefit from supplying them in a similar manner to the Xbox Game Pass.
- ▶ Both companies may benefit from changing their marketing practices and improving the consistency of their social media presence.

Limitations

- ▶ Our dataset is dedicated to English language posts on a western platform.
- ▶ Lack of Geodata in our tweets limits our ability to identify markets and develop more specific insights.
- ▶ Our marketing-sentiment correlation model could be improved and produce more informative results if we introduced more variables.
- ▶ Sentiment seems to be highly affected by intersecting topics such as game releases and delays.
- ▶ Launch success will likely be influenced by supply chain issues stemming from the global pandemic which is not accounted for in our analysis.

References

- ▶ McDermott, J. (2013) 'Xbox, Playstation gear up for bruising ad-spending battle', Advertising Age, 84(24), p. 6
- ▶ Bulik, B. S. (2007) 'Playstation, Xbox Regroup After Being Waxed by Wii', Advertising Age, 78(28), pp. 3–35
- ▶ FBI102420 (2020) 'Gaming Console Market Size, Share & Industry Analysis, By Type (Home Consoles and Handheld Console (Portable and Non-Portable)), By End-use (Residential and Commercial), By Applications (Gaming and Non-Gaming), and Region Forecast, 2020-2027', Fortune Business Insights
- ▶ 'Console Wars, Video Games (24-03-2007), The Economist (London), Vol.382 (8521), p.74
- ▶ Browning, Kellen; Lohr, Steve (September 21, 2020). 'Microsoft Grabs Some of World's Biggest Games in \$7.5 Billion Deal', The New York Times
- ▶ 'Playstation 5 v Xbox Series X' (07-11-2020), The Economist (London)
- ▶ Michael Andronico (21-10-2019), 'PS4 vs. Xbox One: Which Console Is Right For You?', TWICE, Vol.34 (17), p.10-11