A Deep Dive Into the Video Game Industry

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Industry and Data Overview

Value:
- 2000: $7.98 billion
- 2021: $178.37 billion

Number of Gamers:
- 2021: 3.03 billion

Main Participants and Game Related Revenues
- Sony: $24.9 billion
- Microsoft: $16.3 billion
- Nintendo: $15.3 billion
- Tencent: $13.9 billion

Variables from Metacritics and VGChartz:
- Name of Video Games
- Platform
- **Release Date**
- **Metascore**
- **User Score**
- Developer
- **Genre**
- Number of Reviews
- Copies Sold

Total Number of Games in the Dataset:
13,805

First Argument:

The Video Game industry has expanded in all aspects over the last 30 years
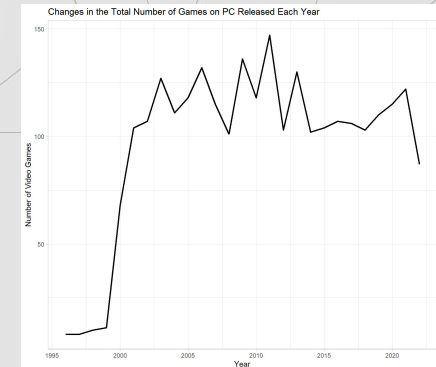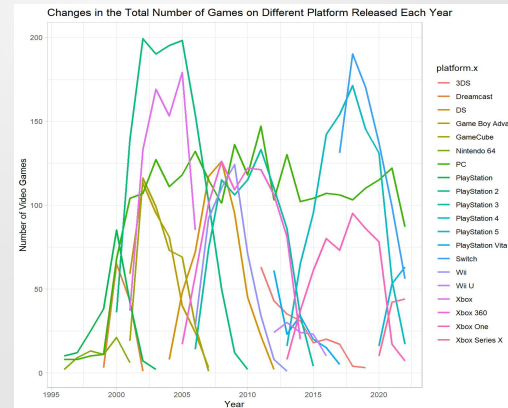
Number of Games Released

- Regression excluding Covid factor

  - Year is a significant variable

    - Year is positively correlated with the number of games released

- Major trends:

  - No. of games decrease from 2002 to 2015

  - No. of games increase From 2015 to 2019

Changes in the Total Number of Games Released Each Year
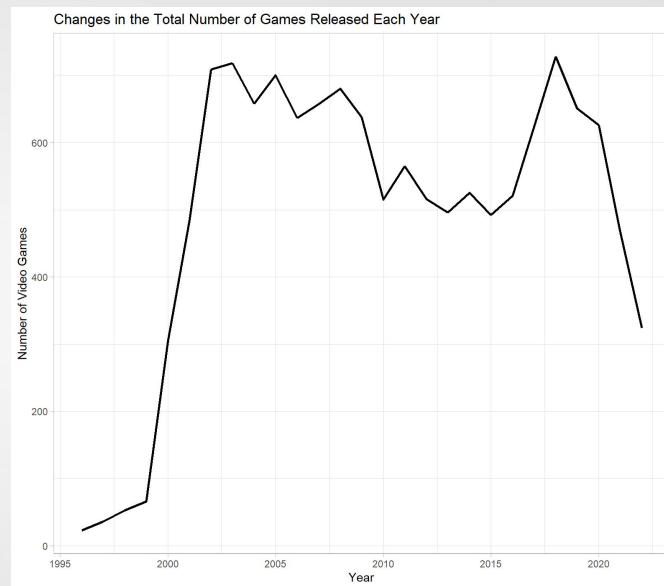
Number of Games by Genres and Platforms

- Interesting findings:
  - Sports games
    - Highly profitable
    - Competitive market
  - PC market
    - High hardware cost
    - Smaller number of gamers

Changes in the Total Number of Games of Different Genre Released Each Year

Changes in the Total Number of Games on Different Platform Released Each Year

Changes in the Total Number of Games on PC Released Each Year
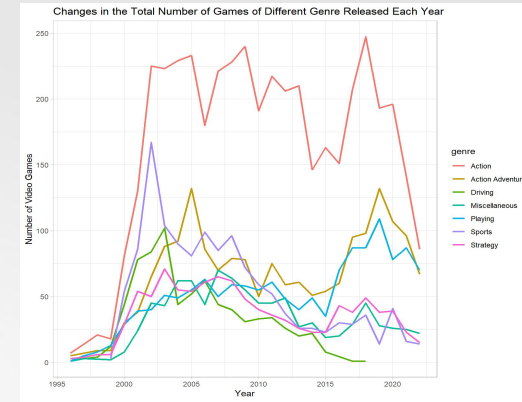
Second Argument

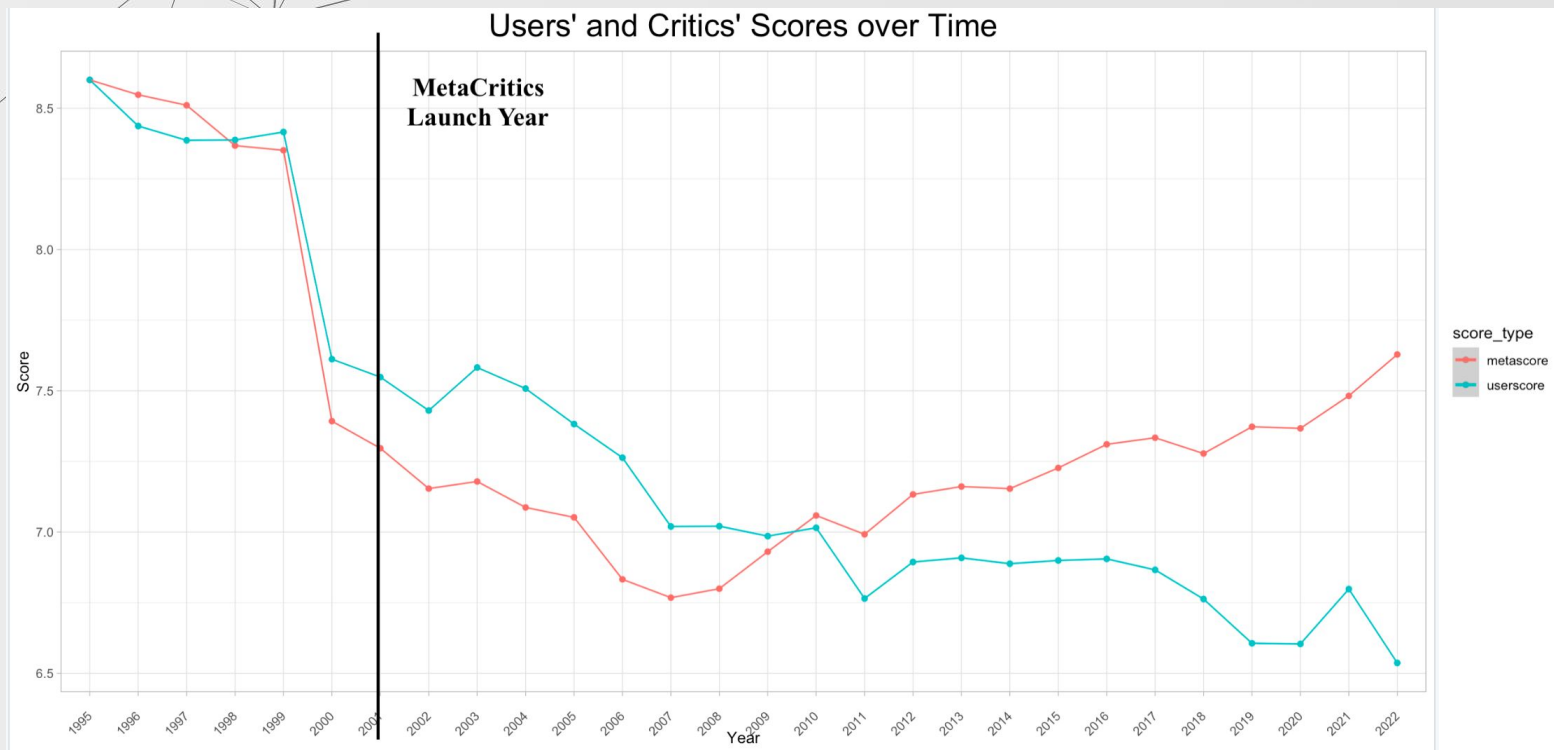There is a relation between scores and rating of games

Userscore and Metascores Over Time

Users' and Critics' Scores over Time

Scores Based on Ratings

	release_date	game_name.meta	genre	metascore	year	userscore	diff
1	2022/10/19	Uncharted: Legacy of Thieves Collection	Miscellaneous	88	2022	44	−44
2	2022/06/23	Sonic Origins	Miscellaneous	73	2022	44	−29
3	2022/06/24	Capcom Fighting Collection	Miscellaneous	79	2022	51	−28
4	2022/07/22	Capcom Arcade 2nd Stadium	Miscellaneous	78	2022	53	−25
5	2022/06/23	Sonic Origins	Miscellaneous	75	2022	52	−23
6	2022/08/30	Teenage Mutant Ninja Turtles: The Cowabunga Collec...	Miscellaneous	78	2022	58	−20
7	2022/06/24	Capcom Fighting Collection	Miscellaneous	77	2022	60	−17
8	2022/02/01	Life is Strange Remastered Collection	Miscellaneous	70	2022	54	−16
9	2022/06/24	Capcom Fighting Collection	Miscellaneous	82	2022	66	−16
10	2022/06/23	Sonic Origins	Miscellaneous	74	2022	64	−10

M and T Ratings with lower userscores

	release_date	game_name.meta	genre	metascore	year	userscore	diff
1	2002/11/29	Shrek: Super Party	Miscellaneous	33	2002	76	43
2	2002/03/25	Britney's Dance Beat	Miscellaneous	53	2002	81	28
3	2002/03/12	Mad Maestro!	Miscellaneous	65	2002	88	23
4	2002/10/29	Monopoly Party!	Miscellaneous	50	2002	70	20
5	2002/10/09	Namco Museum	Miscellaneous	62	2002	81	19
6	2002/03/20	Tetris Worlds	Miscellaneous	44	2002	61	17
7	2002/09/24	Rayman Arena	Miscellaneous	60	2002	77	17
8	2002/09/11	Egg Mania: Eggstreme Madness	Miscellaneous	64	2002	80	16
9	2002/09/03	Pac-Man Fever	Miscellaneous	54	2002	69	15
10	2002/10/08	Whacked!	Miscellaneous	59	2002	74	15

E and PG Ratings with higher userscore

Other Findings

Difference between Metacritics and Users

Standard Deviation of Metascores and Userscores over Years
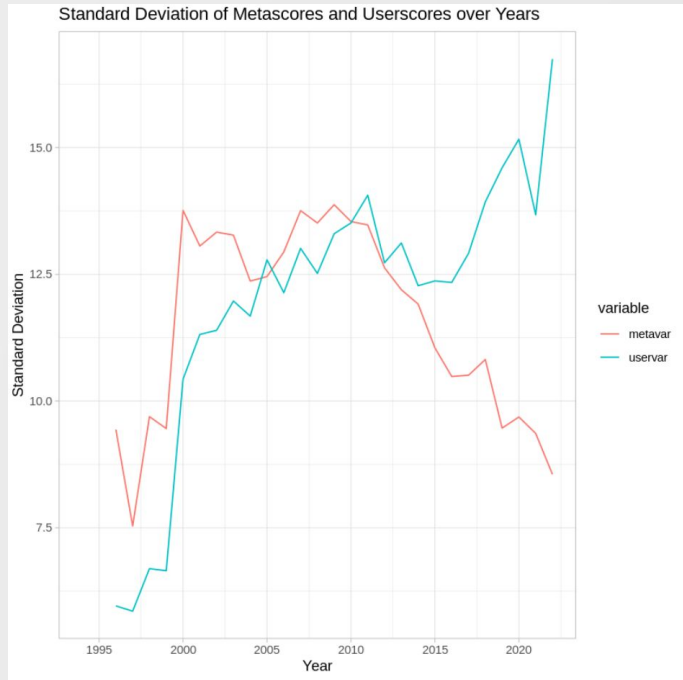
- For most genres, metascores are highly and negatively correlated with the number of games released in the year
- Userscores are not

- Metacritics are more conservative and concerned about the larger environment
- Users are more picky and give scores that represent their true interests.

Developers and Classical Bias

- Metacritics has a classical bias towards games that have multiple series

Ex: Polyphony Digital
- long series of Gran Turismo (Driving)
- Last version
  - metascore of 87
  - userscore of 21

Average Metascores and Userscores for Polyphony Digital over Years
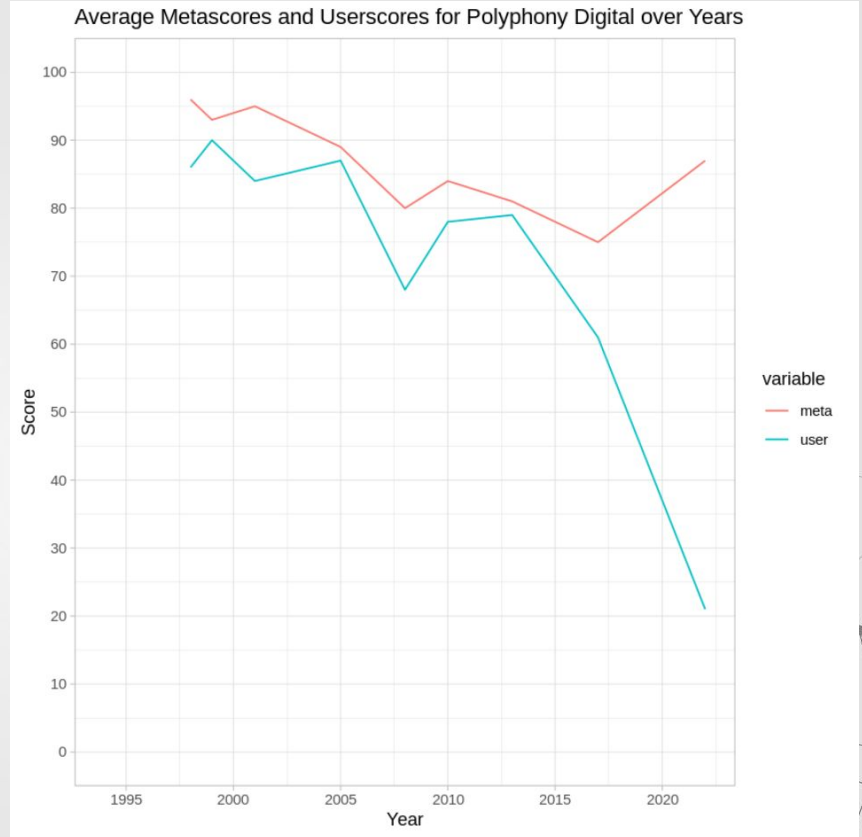
Summary of Findings

Market Saturation

The market is increasing at an incredible speed before 2002, but due to covid pandemic and market saturation, the number of games released per year is flattening out.

The difference between userscores and metascores partially depend on ESRB ratings and the different judging standards between the two parties.

Discrepancy between Scores

Classical Bias

Metacritics has classical bias towards succeeding series of a successful original game, whereas users rated more based on the actual quality and creativity of the individual series.

THANKS

Does anyone have any questions?