

ANALYSING THE VIDEO GAME INDUSTRY

DONNA NAADU BOTCHWAY

NOVEMBER 2023

Table of Figures

| | |
|--|---|
| Figure 1 Total Sales Trend Over Time | 3 |
| Figure 2 Genre Analysis per Sales | 4 |
| Figure 3 Top 5 Performing Platforms per Sales | 5 |
| Figure 4 Top 5 Performing Platforms per Sales | 6 |
| Figure 5 Top 5 Selling Games per Sales | 7 |
| Figure 6 Overview of Video Game Sales Analysis | 7 |

Table of Contents

| | |
|-------------------------------|----|
| Table of Figures | II |
| 1. Overview | 1 |
| 2. Project Description..... | 1 |
| 3. Design..... | 2 |
| 4. Findings and Insights..... | 2 |
| 4.1. Total Sales Trends | 2 |
| 4.2. Genre Analysis..... | 3 |
| 4.3. Platform Analysis..... | 4 |
| 4.4. Publisher Analysis | 5 |
| 5. Conclusion..... | 6 |
| 6. Recommendations | 6 |
| 7. Reference | 7 |

1. Overview

The Video Game Sales Analysis project aims to explore and analyse sales data from over 16,500 video games. The primary objective of this analysis is to gain insights into trends, factors influencing sales, and to identify opportunities within the video game industry. The analysis is conducted using Power BI, a powerful data visualization tool.

The dataset spans from sales made in the year 1980 to the year 2020, covering a total of 41 years. The cumulative sales over this period amounted to an impressive \$8.92 billion.

Below is a summary of the key findings.

Best Selling Game: The overall best-selling game out of the total 11,493 games analysed was "Wii Sports," a sports genre game with astounding total sales of \$8,274,000. This game's exceptional performance underlines the popularity of sports-themed games among consumers. *(Figure 5)*

Best Selling Genre: Among the 12 game genres, the "Action" genre emerged as the overall best-seller, with 1,925 games contributing to total sales of \$1,751,180,000. It is noteworthy that while the best-selling game falls into the sports genre, the action genre dominates in terms of total sales. *(Figure 2)*

Best Performing Publisher: Out of the 579 publishers examined, "Nintendo" emerged as the best-performing publisher. With 667 games in their portfolio, Nintendo achieved total sales of \$1,758,656,000 across 10 different gaming platforms. *(Figure 4)*

Best Performing Platform: Among the 31 gaming platforms, "PS2" (PlayStation 2) claimed the top spot. With a staggering 2,161 games developed for this platform, it generated total sales of \$1,255,640,000 and was utilized by 173 publishers. *(Figure 3)*

Sales Trends Over Time: An interesting trend emerges as we analyse the relationship between the number of games sold per year and total revenue. The data suggests that higher game quantities yield greater revenue, with 2008 marking the peak in sales revenue with 1,039 games generating \$678.9 million. After 2008, there is a noticeable decline in sales revenue as the number of games sold decreases. This observation underscores the importance of game quantity in revenue generation. *(Figure 1)*

We can refer to [Key Attributes](#).

2. Project Description

In this project, we analyse a dataset containing information on video games with sales exceeding 100,000 records. The dataset includes essential fields such as rank, game name, platform, release year, genre, publisher, and sales figures for North America (NA), Europe (EU), Japan (JP), and the rest of the world, with global sales representing the total sales generated. Our analysis aims to address the following key questions:

- **Industry Growth Over Time:** We investigate the historical growth and fluctuations in the video game industry's total sales from 1980 to 2020.

- *Most Sought-After Genre:* We identify the genre that has proven to be the most sought after among gamers, considering both the number of games released and total sales.
- *Platform Dominance:* We explore which gaming platform has consistently dominated the video game market in terms of total sales and the number of games published.
- *Top Revenue-Generating Publisher:* We analyse the various game publishers to determine which one stands out as the top revenue generator and explore the factors contributing to their success.

3. Design

Our methodology involves using Power BI to clean, transform, and visualize the dataset. The report and dashboard incorporate a variety of charts and visualizations, each tailored to answer specific questions and uncover insights. The analysis encompasses the following key aspects:

- *Total Sales Trends:* We delve into the overall trend in video game sales from 1980 to 2020, using visualizations to provide a comprehensive understanding of the industry's growth and fluctuations over time.
- *Genre Analysis:* We identify the most popular game genres and their sales trends, with visualizations that provide insights into genre preferences and market dynamics.
- *Platform Analysis:* We examine the performance of the top-selling platforms over time. This includes visualizations that illustrate platform dominance in the video game market and how it has evolved.
- *Publisher Analysis:* We analyse the performance of various game publishers, with visual representations highlighting the top revenue-generating publishers and any notable trends in their performance.

4. Findings and Insights

4.1. Total Sales Trends

Our analysis of total video game sales over the years has unveiled interesting trends which are as follows.

- *Historical Trends:* From 1980 to 2003, there was a consistent pattern of ups and downs in total video game sales. However, in 2003, a significant upward trend commenced, leading to a peak in total sales in 2008.
- *Decline Post-2010:* A noteworthy trend emerges post-2010, where a substantial decline in total sales is observed. Understanding these trends is vital for strategic planning and decision-making within the industry.
- *Correlation Between Game Quantity and Revenue:* An intriguing observation is the strong correlation between the number of games sold annually and the corresponding revenue generated. In 1980, a mere nine games contributed to sales of \$11,380,000. The zenith of sales was witnessed in 2008, with 1,039 games resulting in an impressive \$678,900,000 in total sales. However, a clear decline in sales is noted in the years following 2008, coinciding with a decrease in the number of games sold annually. This observation underscores the critical role of the quantity of games in driving revenue generation.

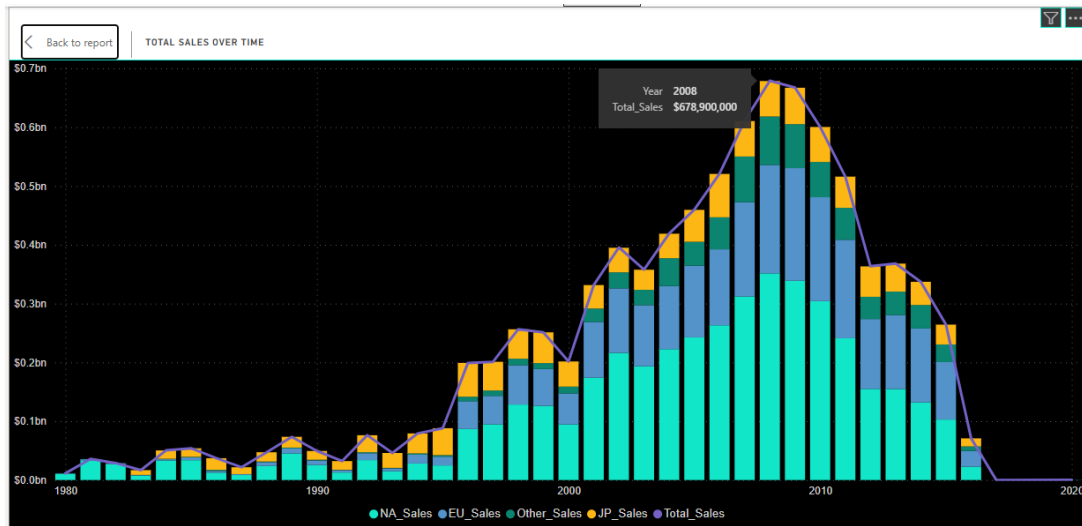


Figure 1 Total Sales Trend Over Time

4.2. Genre Analysis

Below are the key findings during the analysis into the performance of different genres.

- **Most Popular Genre:** The data clearly shows that the Action genre is the most popular, both in terms of the number of game releases and sales. It consistently ranks as the top genre over the years.
- **Sales Trends:** Action genre's highest sales were recorded in the year 2009, with a noticeable decrease in sales since then. It's worth noting that it hasn't seen significant sales in recent years.
- **Top 3 Performing Genres:** Alongside Action, the Sports and Shooter genres consistently rank among the top three performing genres. These genres offer lucrative opportunities for game developers.
- **Least Performing Genre:** The Strategy genre appears to be the least performing genre, with a total sale of 175.12 million dollars. It features 584 games and spans 23 platforms, involving 120 publishers. Sales for this genre saw a peak in 2009 and have dwindled since 2016.
- **Other Low-Performing Genres:** Adventure and Puzzle genres also make it to the list of low-performing genres. However, Puzzle, despite having fewer games compared to Strategy, managed to generate sales of 244,950,000 dollars with 499 games.

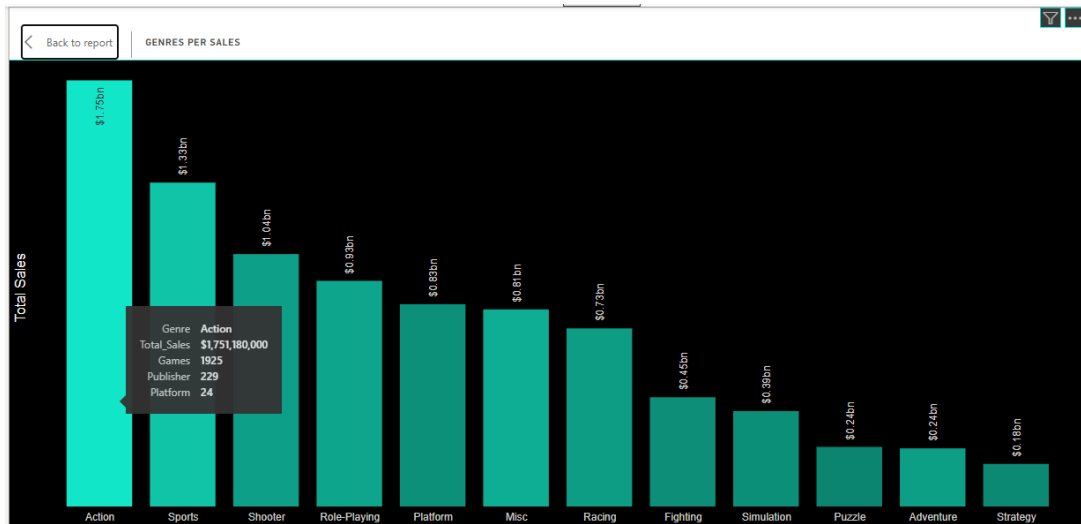


Figure 2 Genre Analysis per Sales

4.3. Platform Analysis

Our analysis provides insights into the performance of gaming platforms which when considered can help publishers and developers in choosing the right platform for their games to maximize sales. The following are key findings.

- ❖ **Top Platform:** The PS2 platform stands out as the top-performing platform, with one of its top games being "Grand Theft Auto: San Andreas." It hosted 2,161 games across 12 genres, with its top genres like Sports and Action being part of the top-performing genres. PS2 was used by 173 different publishers and generated a total revenue of 1.26 billion dollars.
- ❖ **Top 5 Platforms:** Following PS2, the top four platforms in the video game industry include X360, PS3, Wii, and DS.
- ❖ **Least Performing Platform:** PCFX appears as the least performing platform, with only one game in the role-playing genre. It was used by the NEC publisher to generate a total sale of 30,000 dollars.
- ❖ **Regional Sales:** Notably, the top-performing platforms typically have a market that includes the North America (NA) zone, which yields the most sales. In contrast, the top five least performing platforms primarily have sales in the Japan (JP) zone, which is the Japanese market with no NA sales hence its performance.



Figure 3 Top 5 Performing Platforms per Sales

4.4. Publisher Analysis

Our analysis also provides insights into the performance of game publishers. Here are the key findings:

- ❖ **Top Publisher:** Nintendo emerges as the leading publisher, with its top-performing game being "Wii Sports." The Sports genre and Wii platform contribute to its dominance. Nintendo achieved total sales of 1.79 billion dollars, published 667 games, and operated across 10 platforms.
- ❖ **Top 3 Performing Publishers:** Alongside Nintendo, Electronic Arts and Activision rank among the top three performing publishers, primarily based on sales. This information could be referred to make valuable partnerships and acquisitions within the industry.
- ❖ **Namco Bandai Games:** In the top 10 publishers, Namco Bandai Games, despite having more published games compared to Nintendo, ranks lower in terms of sales. Notably, Namco's top genre, Fighting, is one of the least performing genres. In contrast, Nintendo's top genres align more closely with the overall best-performing genres. The North America (NA) market consistently outperforms other regions, with Europe, Japan, and the rest of the world following. This insight can help publishers allocate marketing and distribution resources effectively, recognizing the significance of the North American market while considering strategies for other regions.

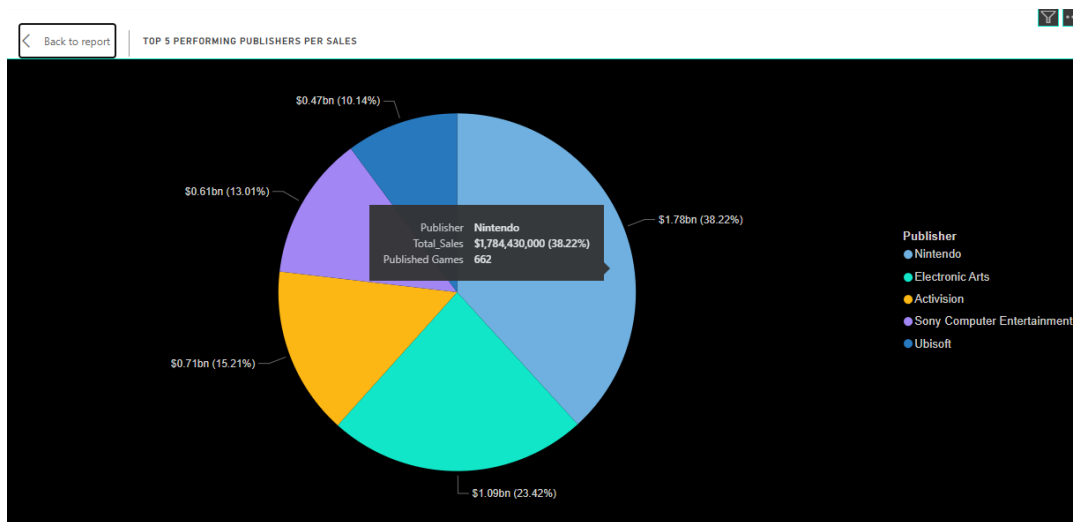


Figure 4 Top 5 Performing Platforms per Sales

5. Conclusion

In this analysis of video game sales spanning from 1980 to 2020, we uncovered vital insights. Fluctuations in total sales over time reveal key growth periods and industry trends. Platform dynamics illustrate the evolving dominance of key players such as PS2 and X360, with North America leading in sales. The Action genre emerges as the favourite, reflecting a strong correlation between game quantity and revenue. Nintendo secures the top publisher spot, with Electronic Arts and Activision making notable contributions. (Figure 6). These findings equip industry stakeholders with essential knowledge to navigate the dynamic video game landscape effectively.

6. Recommendations

Based on the insights derived from the analysis, we recommend stakeholders such as game developers, investors, publishers, and gaming platforms consider the following:

- ❖ **Diversify Game Portfolios:** Consider offering a variety of game genres to appeal to a broader audience while focusing on popular genres such as action and sports.
- ❖ **Strategic Platform Choices:** Make informed decisions about the gaming platforms to ensure the widest reach, taking regional market dynamics into account.
- ❖ **Embrace Market Trends:** Stay updated with industry trends and be open to exploring new genres and gaming innovations.
- ❖ **Collaborate with Established Publishers:** Partner with reputable publishers with a successful track record like Nintendo, to enhance the chances of a game's success.
- ❖ **Effective Marketing and Distribution:** Tailor marketing strategies for different regions, prioritizing high-performing markets, especially North America.
- ❖ **Balance Quality and Quantity:** Maintain a balance between the number of games released and their quality to maximize revenue while ensuring a positive gaming experience.

7. Reference

- [Link to Power BI Report on Video Game Sales](#)
- [Link to Dashboard – Power BI Service](#)
- [Link to Key Attributes](#)

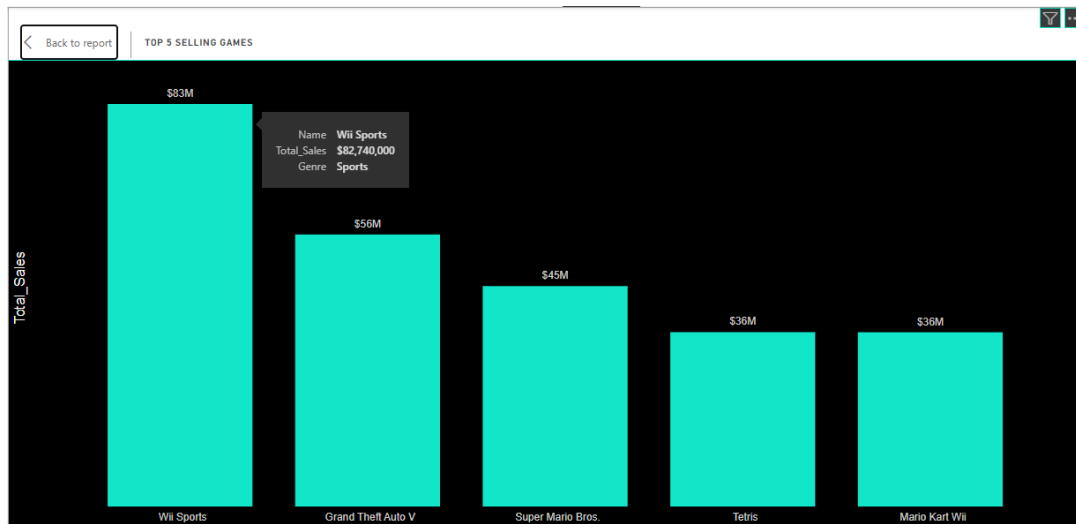


Figure 5 Top 5 Selling Games per Sales

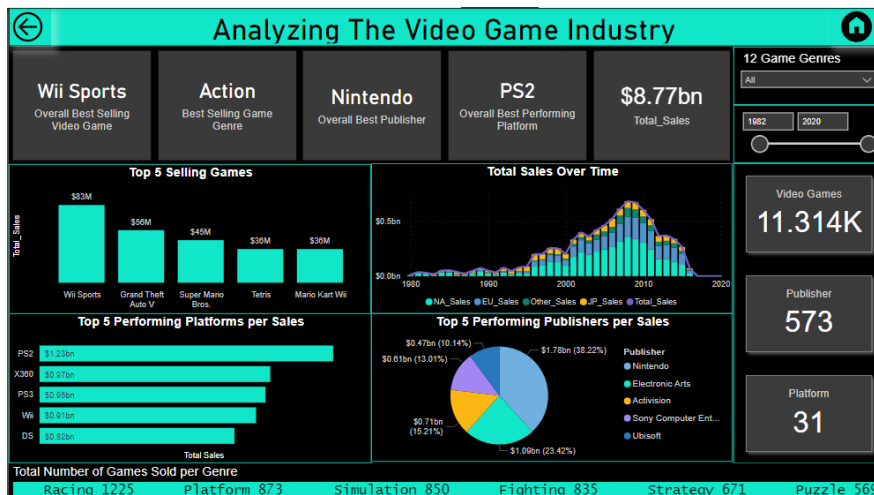


Figure 6 Overview of Video Game Sales Analysis