

Power BI Project Report

Game Sales Analysis

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1. Introduction

This project is a hands-on exploration of Power BI, focusing on data visualization techniques. The original analysis was conducted using Tableau(https://github.com/soichiberson/Tableau_practice_game_sales), and this project replicates the analysis using Power BI. The analysis utilizes the 'Video Game Sales' dataset from Kaggle (<https://www.kaggle.com/datasets/gregorut/videogamesales/>) and references design principles from YouTube (https://youtu.be/_xs8XXIGQVM?si=8VRXpreskPJhuUaE, <https://youtu.be/v6fP8gyCLLc?si=5QlXT8vqSoK31wnZ>).

The analysis is based on the 'Video Game Sales' dataset retrieved from Kaggle (<https://www.kaggle.com/datasets/gregorut/videogamesales/>), with the reference by YouTube as designing (https://youtu.be/_xs8XXIGQVM?si=8VRXpreskPJhuUaE, <https://youtu.be/v6fP8gyCLLc?si=5QlXT8vqSoK31wnZ>)

2. Scenario and Questions

The dataset offers insights into game sales across dimensions such as year, genre, publisher, and regions. The primary objective is to understand the trend in game sales from 1980 to the present. Key questions addressed include:

- **Genre Trend:** Evolution of game genres over time.
- **Sales by Zones:** Analysis of sales trends across different regions.
- **Game Trends:** Identification of trends in specific games.
- **Platform Trends:** Understanding the popularity of gaming platforms.
- **Publisher Trends:** Investigating the performance of game publishers.

3. Power BI Mastery: Techniques and Notes

Task:

Outlined below are key Power BI techniques employed during the project, encompassing the creation of charts, text sheets, and parameters for effective data organization.

Charts Created:

1. **Sales by Genre:**
 - *Chart Type:* Bar Chart
 - *Purpose:* Visualizing the overall sales distribution across different game genres.
2. **Sales by Years and Genre:**
 - *Chart Type:* Area Chart

- *Purpose:* Analyzing sales trends over the years within each genre.
3. **Names by Sales:**
 - *Chart Type:* Horizontal Bar Chart
 - *Purpose:* Identifying the top-performing games based on sales.
 4. **Sales by Main Platforms:**
 - *Chart Type:* Pie Chart
 - *Purpose:* Highlighting the main gaming platforms based on sales.
 5. **Main Publishers:**
 - *Chart Type:* Area Chart
 - *Purpose:* Visualizing the main publishers in terms of game sales.

Text Sheets Created:

1. **Total Platforms in the Dataset:**
 - *Purpose:* Displaying the total number of unique gaming platforms in the dataset.
2. **Total Publishers in the Dataset:**
 - *Purpose:* Indicating the total number of unique game publishers in the dataset.
3. **Total Genres in the Dataset:**
 - *Purpose:* Highlighting the total number of unique game genres in the dataset.

Parameters Created:

1. **Sales_prm:**
 - *Purpose:* Organizing data based on sales zones (EU, Global, JP, NA, Other).

```
1 Sales_prm = {  
2     ("Global Sales", NAMEOF('Parameter'[Global Sales]), 0),  
3     ("Europe Sales", NAMEOF('Parameter'[Europe Sales]), 1),  
4     ("Japan Sales", NAMEOF('Parameter'[Japan Sales]), 2),  
5     ("North America Sales", NAMEOF('Parameter'[North America Sales]), 3),  
6     ("Other Sales", NAMEOF('Parameter'[Other Sales]), 4)  
7 }
```

4. Findings from Data Analysis and Insights

1. Genre Trend:

- The evolution of game genres over time reveals that "Action" maintains consistent popularity across the years. In Japan, "Role-Playing Games" emerge as the most favored genre, demonstrating a unique preference.

2. Sales by Zones:

- Sales trends across regions show a distinctive pattern in Japan. Japanese sales demonstrate two peaks, notably in 1996 and 2006, unlike other regions, which experienced continuous growth until 2008.

3. Game Trends:

- Trends in specific games highlight the temporal popularity of iconic titles such as "Super Mario Bros.," "Tetris," "Pokemon," "Wii Sports," and "Grand Theft Auto."

4. Platform Trends:

- Understanding the popularity of gaming platforms reveals shifting market shares, with NES dominating in the 80s, GB (Game Boy), PC, and N64 rising in the 90s, and Wii, X360, and PS3 sharing the market since the 2000s.

5. Publisher Trends:

- Investigating the performance of game publishers showcases a dynamic landscape, with Nintendo dominating in the 80s, and Sony Computer Entertainment, Activision, and Electronic Arts sharing the sales landscape in a highly competitive environment since the 90s.

6. Text Sheet:

- In the 80s, there were 77 game publishers, surging to 236 in the late 90s. Since 2000, the industry has seen an increase of 447 publishers, despite a decline in game sales post-2008. The landscape has become more competitive, showcasing the industry's resilience and attracting a diverse array of publishers.