eSports Earnings Data Analysis

By Jackson Taylor INFSCI 1520 - Spring 2025

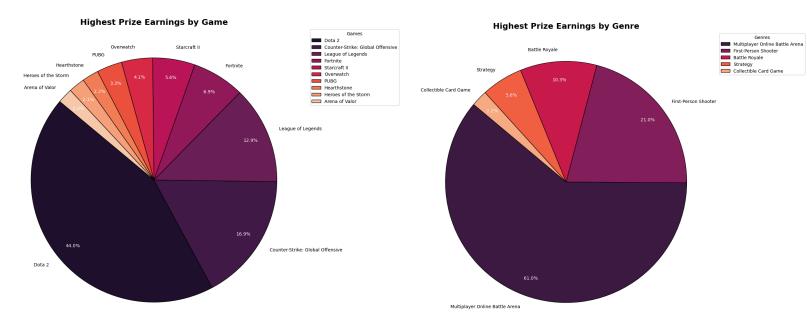


Figure 1: Highest Earnings by Game

Figure 2: Highest Earnings by Genre

Figure and Legend Explanation:

The main two figures consist of two side-by-side pie charts, visualizing the highest prize earnings in eSports by Game (left) and Genre (right).

- In the left chart, each colored segment represents a top-earning eSports game. The size of each segment corresponds to the percentage of total prize money distributed by that game among the top ten. Labels outside the segments indicate the game names and their respective share.
- In the right chart, the breakdown is aggregated by genre, with each color denoting a different category of game. The chart demonstrates how genre-level preferences can influence the distribution of prize pools.
- Both charts include a legend clarifying the categories and use proportional wedges to illustrate comparative earnings visually.

This dual-panel view highlights both individual games as well as game types that dominate the prize pools for the scene and have the most competitive investment.

Findings for Figure 1 and 2:

- Dota 2 accounts for 44% of total prize money, almost half of the earnings
- The smallest games are Fortnite and Starcraft II with 6.9% and 5.6% respectively
- MOBA games are the most popular genre, including both Dota 2 and League of Legends, which combine for nearly 57% of total prize earnings.
- Strategy and Collectible Card Games are very unpopular, earning 5.6% and 2.2% respectively

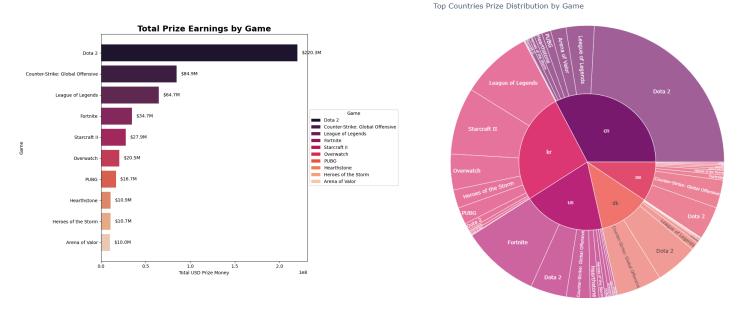


Figure 3: Total Prize Earnings by Game

Figure 4: Top Countries Prize Distribution by Game

Figure and Legend Explanation:

These two supporting figures consist of a bar plot showcasing the total prize earnings by game on the left, and a sunburst chart showcasing the top 5 earning countries, and which games make up each countries earnings on the right.

- In the left chart, each colored segment represents a top-earning eSports game. The size of each segment corresponds to the percentage of total prize money distributed by that game among the top ten. Labels outside the segments indicate the game names and their respective share.
- In the right chart, each colored segment corresponds to one of the top 5 earning countries for prize pools in eSports. Within each country's section on the outside ring is each of the games that make up that country's prize pool, with the larger sections meaning that country is particularly dominant in that game.
- The left chart has a legend clarifying each game and the color that corresponds with it on the graph, the right chart showcases abbreviations for the top 5 countries being: US: United States, KR: South Korea, CN: China, DK: Denmark, SE: Sweden.

These figures highlight both what the top earning games are, as well as which of these games is dominated by which region. We also get to see which countries are earning the most overall prize pool.

Findings for Figure 3 and 4:

- The most dominant country is China, who have a high prize pool earnings from the number one prize pool game, Dota 2.
- The smallest countries in terms of prize pool are Denmark and Sweden, combining to be slightly bigger than the United States in prize pool earnings, but less than South Korea and China.
- Each region tends to have preferences in the games they play, China and South Korea have a heavy lean towards MOBA games, while the United States has a preference for Battle Royales.
- European countries are more varied in game preference, being evenly spread across games.

Analysis:

The visualizations reveal a concentration of prize money with a small subset of games and genres in the eSports industry. MOBA titles, particularly Dota 2 and League of Legends, dominate both in total earnings as well as in regional specialization, particularly in Asia. First-person shooters and Battle-Royales also hold relevance and can be seen across all of the regions. Specifically, North America is a top earner for Fortnite, a Battle Royale game, Denmark and Sweden have a strong showing in the First-Person Shooter Counter-Strike. South Korea is also relevant in a First-Person Shooter, Overwatch. These geographical preferences shine a light on the suggestion that success in eSports is closely tied to both game type and geographical focus.

Conclusion:

This analysis of eSports prize earnings provides a clear snapshot of where the financial power lies within the competitive gaming world. From the overwhelming dominance of titles like Dota 2 to the genre success of MOBAs, it's evident that a few specific games and genres have the most investment in the industry. Other geographic patterns showcase that regions like China and South Korea not only produce top players but also specialize in specific game types. These insights help contextualize the competitive landscape and could guide decisions for aspiring players, investors, and game developers targeting global eSports growth.

Data and Methods:

Data Source: eSports Earnings

Files Used:

- highest earning teams.csv
- highest earning players.csv
- country-and-continent-codes-list.csv

Data Preparation:

- Read in provided files
- Handled missing values

Tools and Libraries:

- Python
- pandas for data manipulation
- plotly and seaborn for interactive and static visualizations

Methodology:

- Aggregated prize earnings by player, team, country, and game genre
- Created comparative visuals: pie charts, bar plots, and a sunburst chart
- Highlighted patterns in regional dominance and genre preference through visual storytelling

Significance Statement:

The rapid growth of eSports reflects a major cultural and economic shift in global entertainment. This visualization reveals not only the most dominant players and countries in the field, but also the emerging regions contributing to the industry and its expansion. Understanding these trends can help sponsors, organizers, and policy makers make informed decisions in a growing industry.

GitHub Repository Link: eSports Earnings Analysis