

Project Reflections

Plotting sales from each region over time gives a snapshot in time for the trajectory of games sales. GameCo's current understanding is that sales for the various geographic regions have remained the same over time.

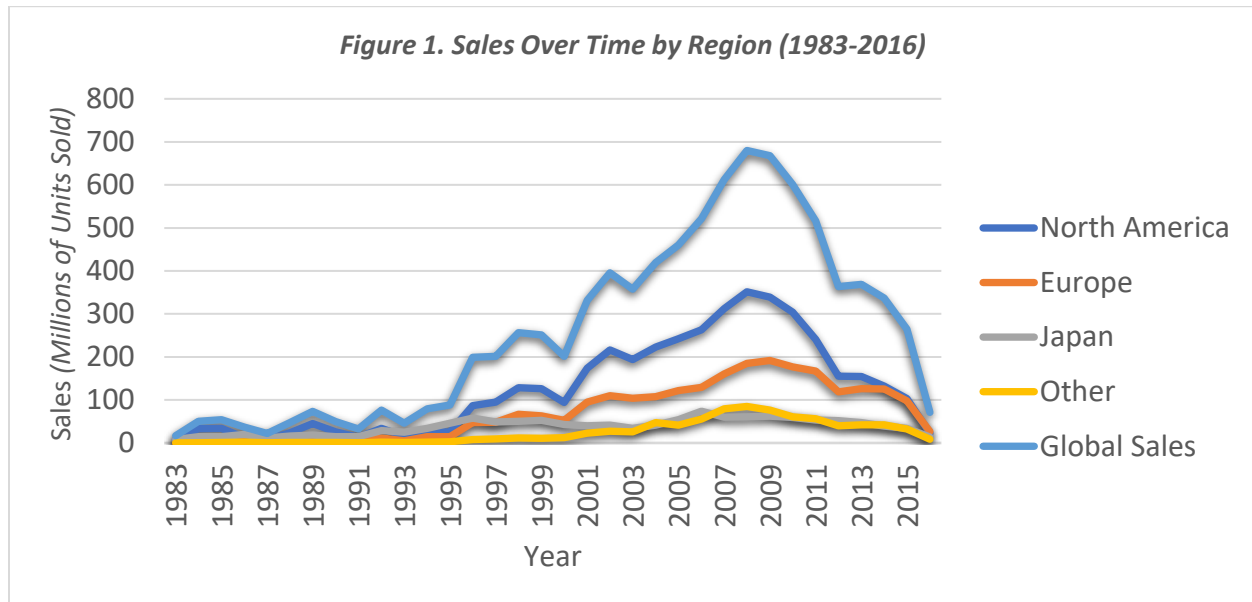
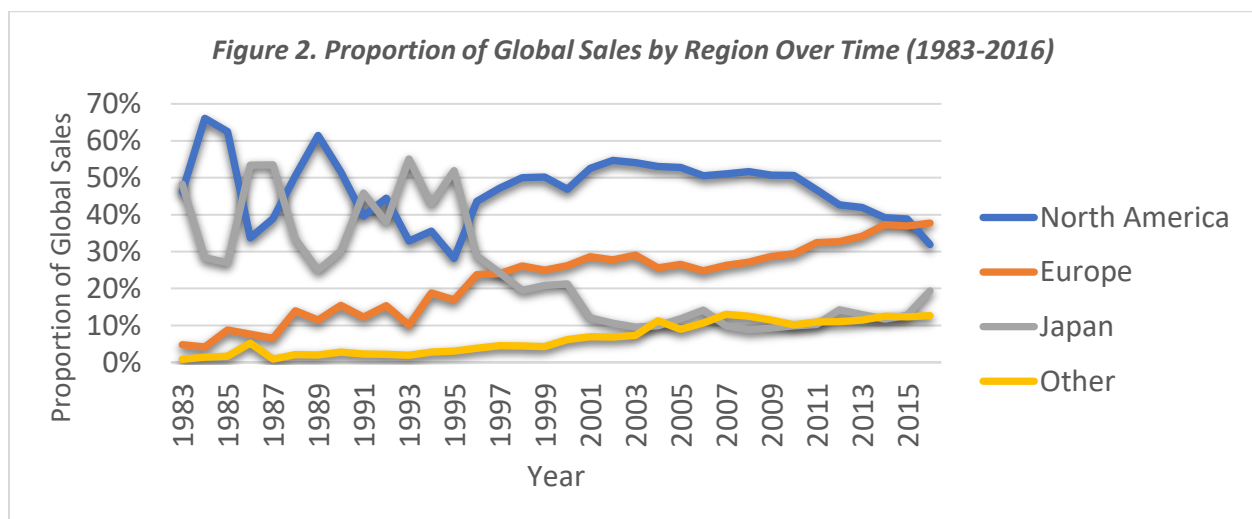


Figure 1 shows GameCo's assumption is incorrect. The key insight is this assumption is true from 1983-1993; however, since 1993 sales in all regions have risen dramatically until peaking in 2008. Sales then declined across all regions until the current time.

Dividing global sales by regional sales, **proportion of sales** shows a deeper look into how each region is fairing *against each other* despite sales in all regions declining.



The key insight from **Figure 2** is Europe has surpassed North America in proportional sales. This is due to North American sales declining more rapidly than European sales. Therefore, GameCo should shift focus from its budget onto Europe.

Budget Priority 2017:

1. Europe
2. North America
3. Japan
4. Other

Where do most game sales come from? By employing a box and whisker plot, data shows that the plot has many extreme upper bound outliers.

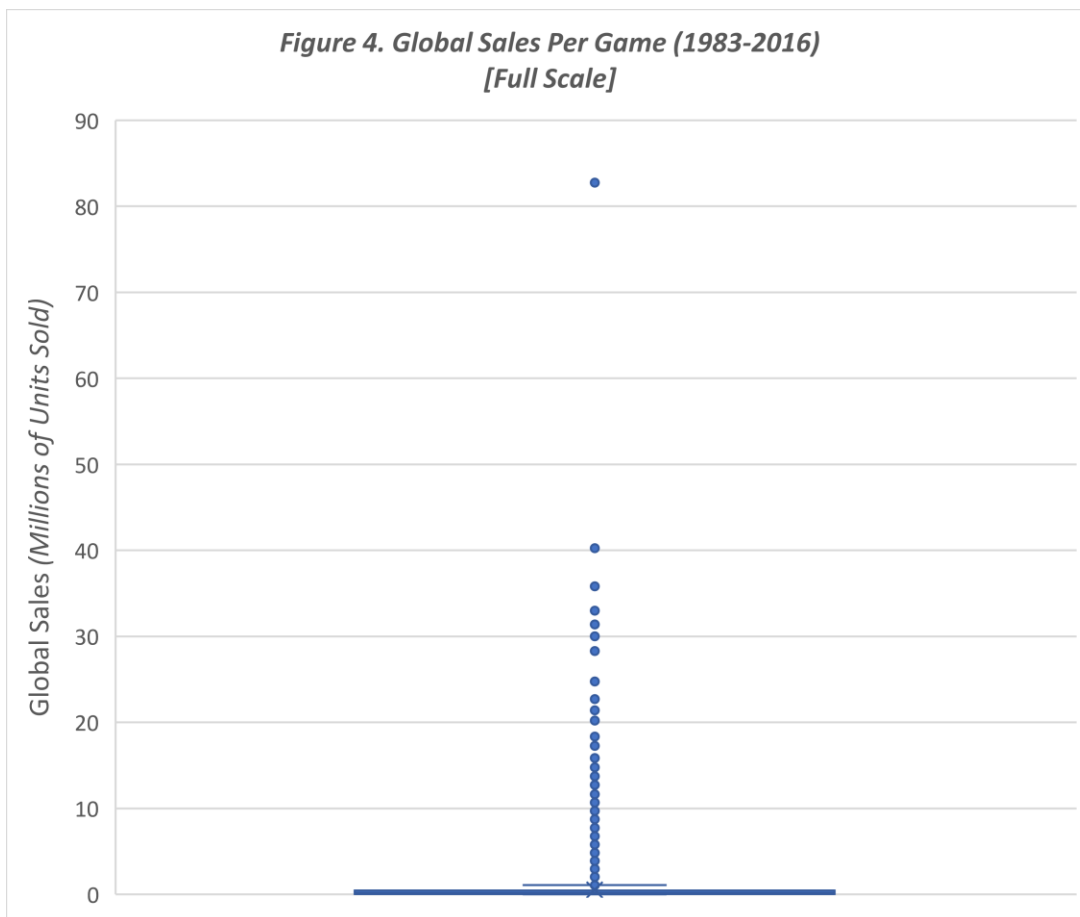
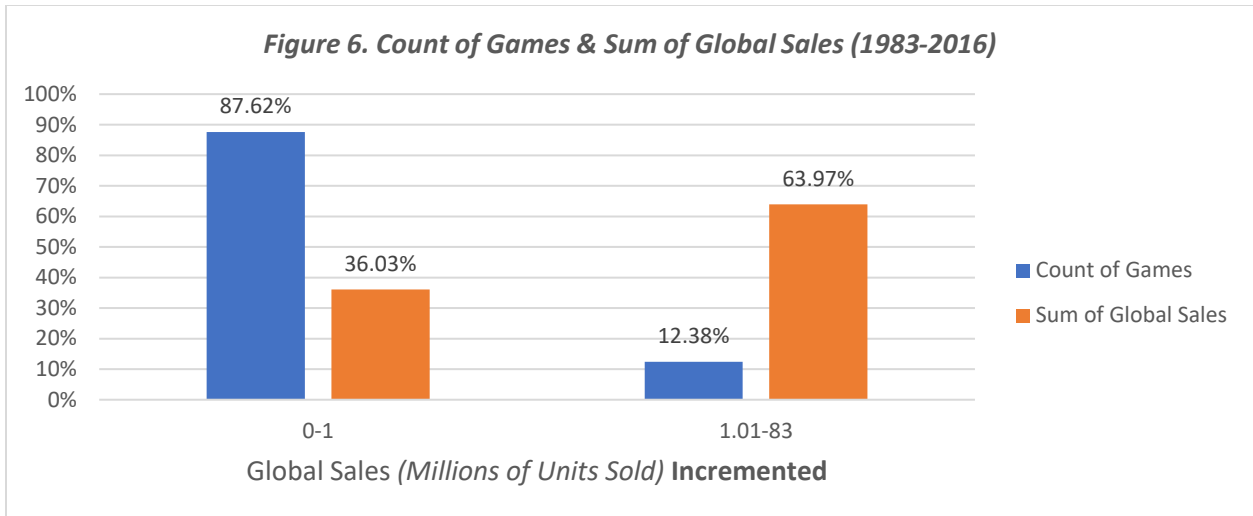


Figure 4 gives a clue that outliers may drive most game profits. The *maximum* from this plot is ~1. Any data points above this value are considered upper bound outliers. Global Sales was then plotted in a histogram in two increments, 0-1 (non-outliers) & >1 (outliers).



Once the non-outliers and outliers are separated by percentage of global sales, the key insight appears. **Figure 6** shows only 12.38% of all games released constitute 63.97% of all global sales. It is impossible for GameCo to advertise every game brought to market as there are simply too many and GameCo's marketing budget is finite. Therefore, GameCo should seek to determine what are the key variables that make games outliers (*best-sellers*).

By comparing game sales per platform, GameCo can determine which platforms are popular in each region.

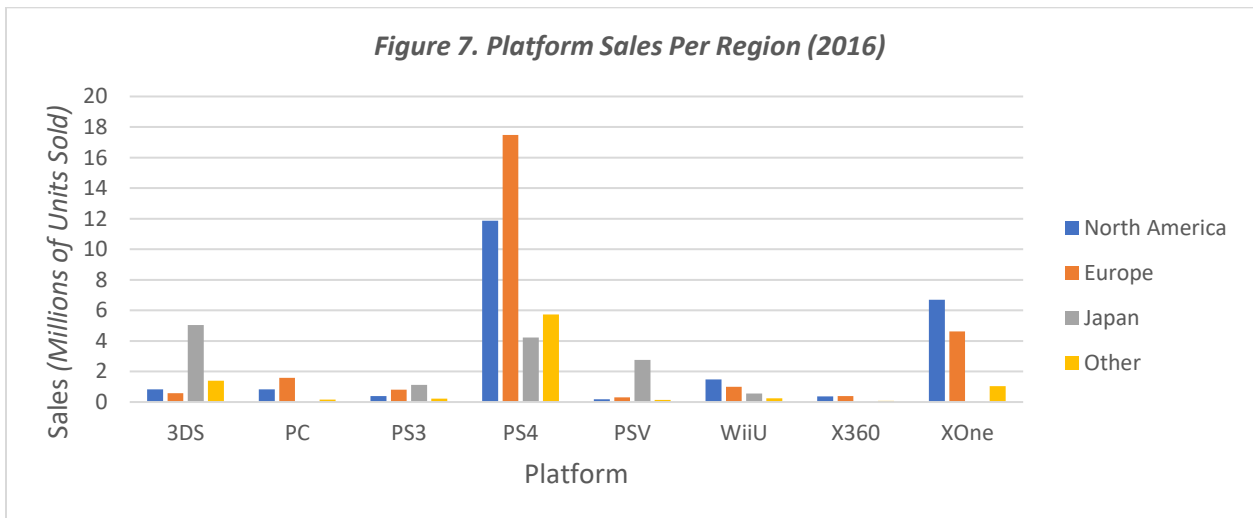
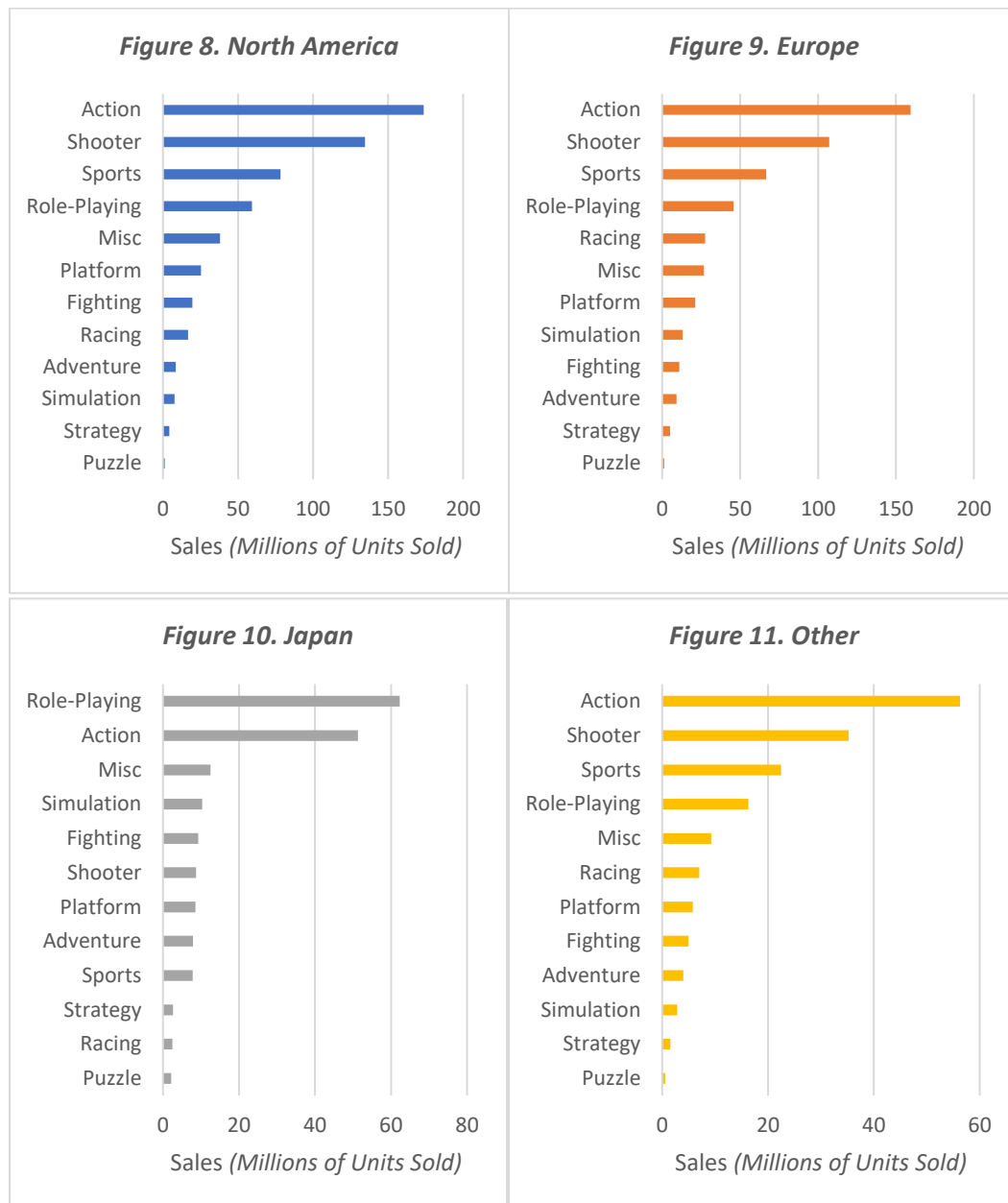


Figure 7 reveals five key insights:

- PS4 was the most popular in every region except Japan.
- 3DS is the most popular in Japan.
- PC sold best in Europe.
- XOne was popular in Europe and North America.
- X360 and XOne sold poorly in Japan.

By comparing game sales per platform from 2016, GameCo can determine which genres are popular in each region.



Figures 8-11 reveal two key insights:

- **Action, Shooter** and **Sports** were the 3 most popular genres in **North America, Europe** and **Other**.
- **Role-Playing, Action** and **Misc.** were the 3 most popular genres in **Japan**.

Another variable to consider is **Publisher**. *Who's making the best-selling games (outliers)?* By dividing global sales of each publisher by total number of games released, a new variable appears: **Average Sales Per Game Released (2012-2016)**.

Figure 12. North America

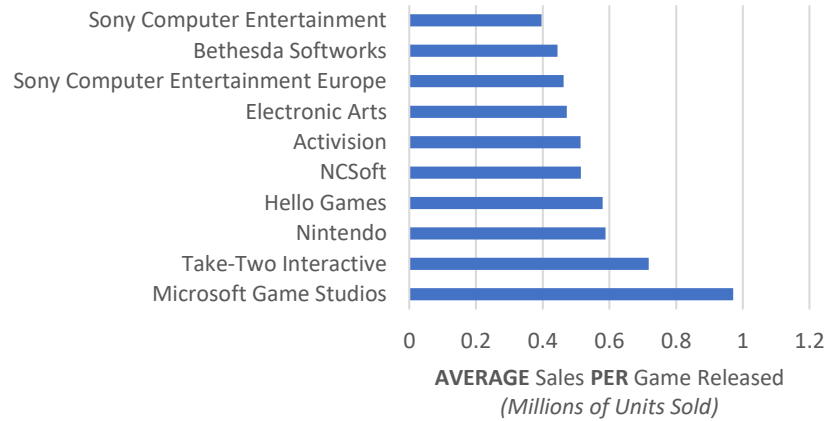


Figure 13. Europe

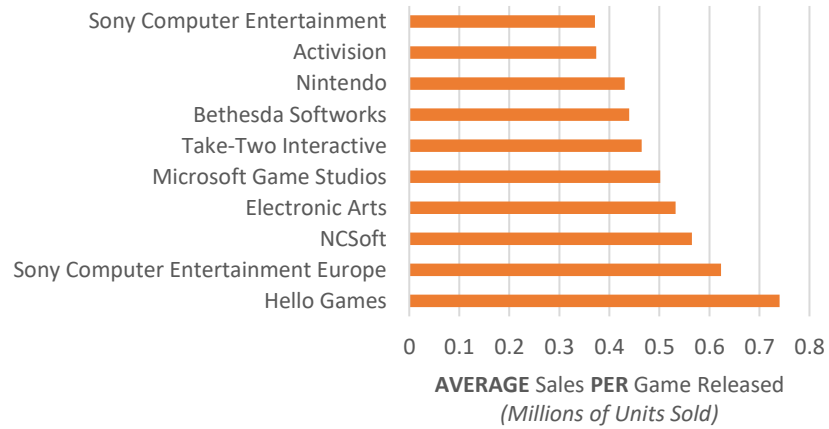


Figure 14. Japan

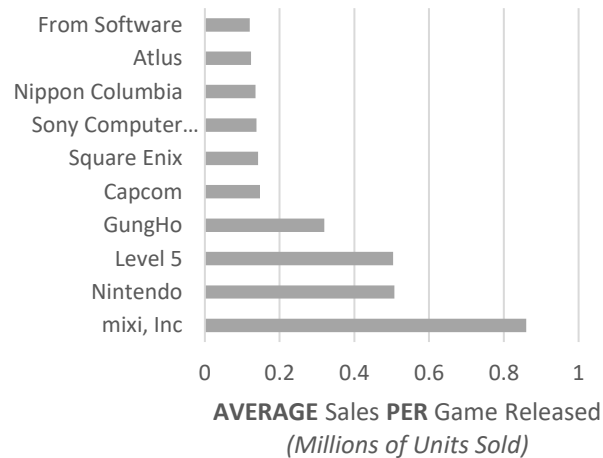
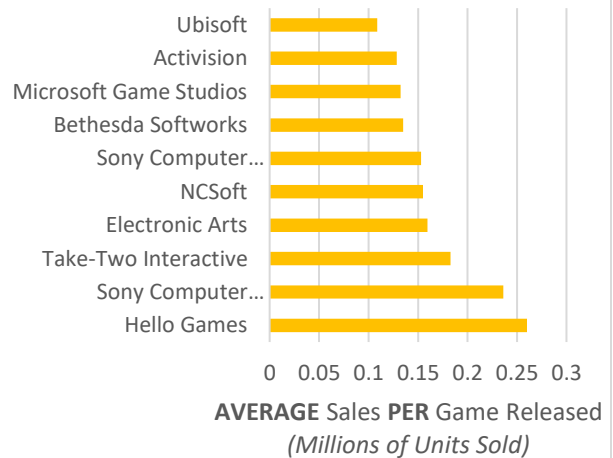


Figure 15. Other



Figures 12-15 show another Key Insight: By using the top **Publishers by Average Sales Per Game Released**, GameCo possesses another variable to help determine what upcoming games are likely to be best sellers in 2017.

By utilizing novel key insights derived from:

- ***Regional differences in Sales***
- ***Platform Preferences***
- ***Genre Preferences***
- ***Best-Selling Publishers***

GameCo wields the necessary information to revise its understanding of games sales and to tailor its marketing budget to maximize its return on investment in 2017.