Task10. PROJECT REFLEXIONS

Assumption

GameCo executives assumed that game sales remained the same over the years for the different geographical locations. Nonetheless, according to our results, we need to reject this hypothesis. Therefore, it is critical to understand how sales for the various regions have changed over the years so that a better budget distribution can be done for 2017.
This scenario calls for a descriptive analysis since we want to check historical information from the data. In addition, we need to make a multivariate analysis since it is necessary to analyse and group many variables, such as genre and platform sales by location.

Methodology

For this analysis, the data first had to be cleaned, resulting in a final dataset with 11 columns and a total of 16599 rows. In most of the columns, there were multiple cells with missing information. Sales missing data for the different locations was handled by imputing average values. In addition, when observing the dispersion of the data points in the dataset, we found that most sales data (75%) is located at low values (0 to 0.24). In addition, there are also higher sales which are placed as outliers. Nonetheless, they were included in our results because they gave important information that only a few categories dominate sales.

Results

The best way to first glance and get the first insight is by showing the total sales variation over the years, according to the different locations (Fig 1).
For this plot, sales data from the different locations (North America, Europe, Japan and others) was summarised and plotted in excel using a line chart.
Fig 1 shows the distribution of sales for the different markets. Here, we observe that from 1980-1995, there was no significant variation for the various locations. However, from 1996 to 2008, there was an exponential increase in the multiple markets, where North America and Europe took the more significant piece of the cake. Nonetheless, North America doubled the sales obtained in Europe. After 2008, sales followed an exponential decay, reaching the lowest point in 2016 for all locations. According to these results, game markets seem to be decreasing competitively. Therefore, I advise researching about what happened between 2008 to 2016. Why is there such a decrease?

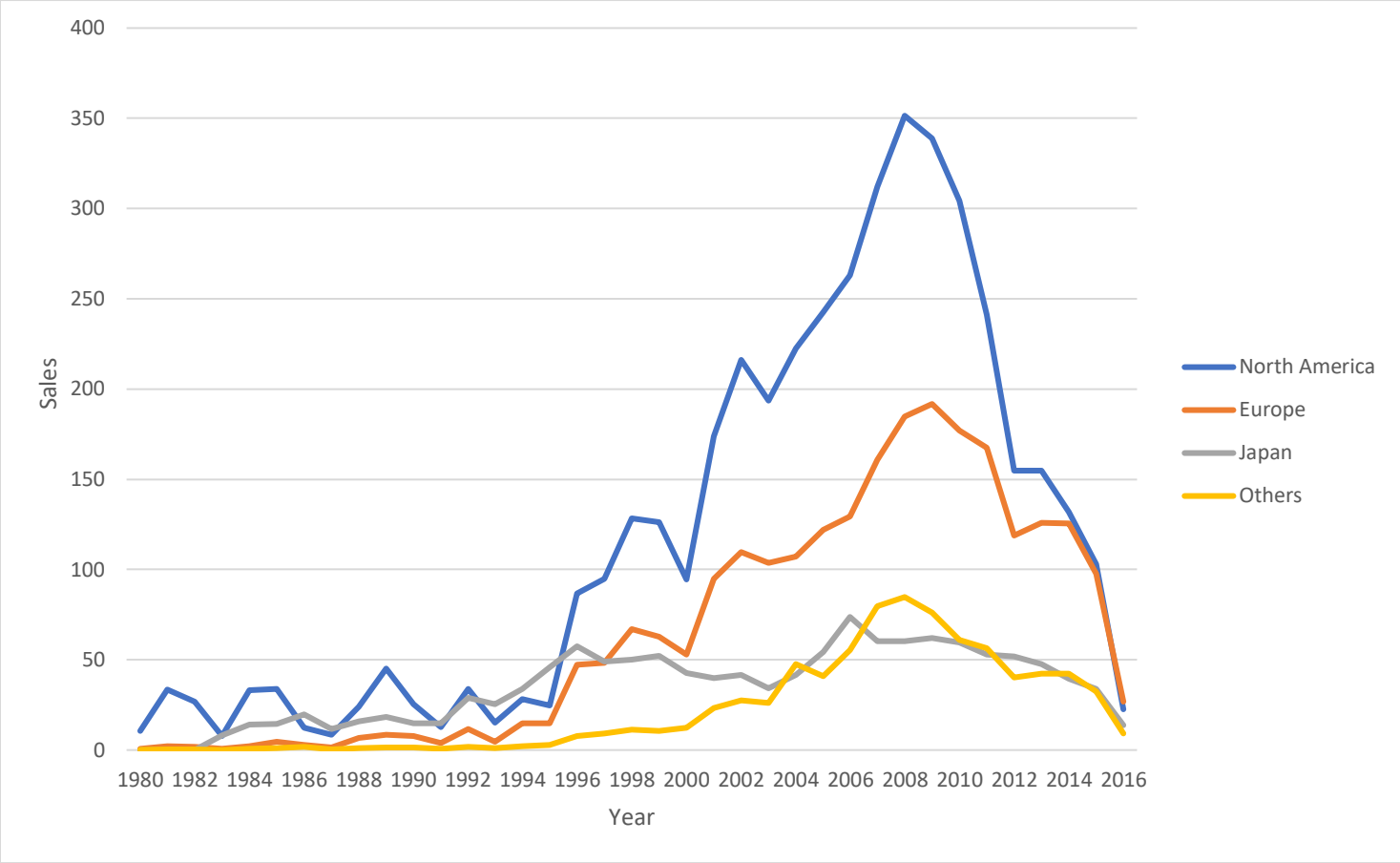

Fig1. Sales over the years

In addition, to better understand and forecast the trend of the different markets, I plotted the percentage of global sales per year for the various regions. For this, I summarised and grouped the data over periods of 5 years, and at the end, I left 2016 in a single group to better see the results (Fig 2).

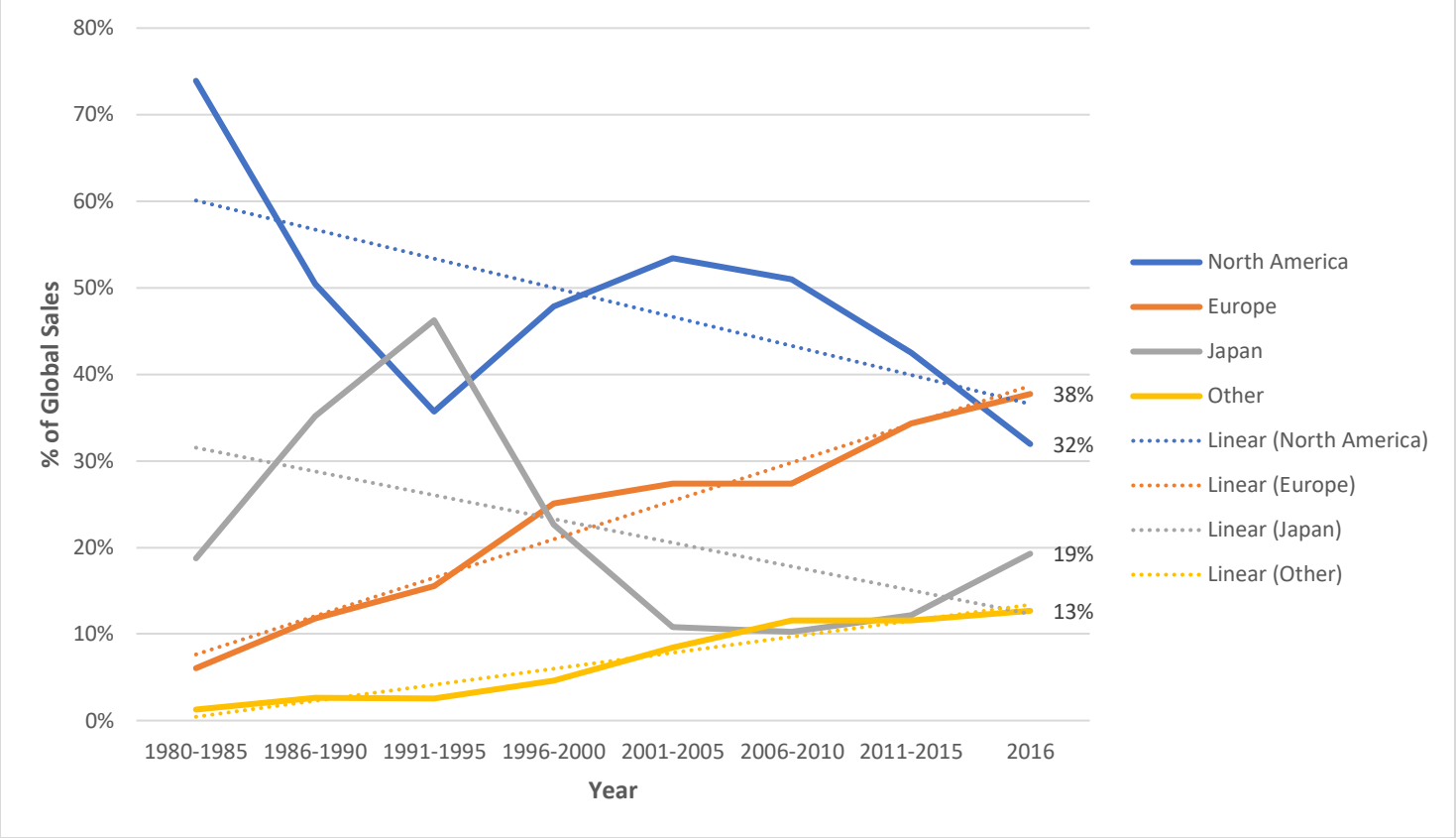

Fig 2. Share of global sales per region over the years

Here, North America's and Japan's curves present decreasing trends being negatively correlated with the increase in time. That means that for 2017, we expect lower sales for these two locations; therefore, investing here would have a significant risk of losing capital.
On the other hand, trends for Europe and others show the opposite behaviour with a positive correlation between gains over the years. In general, the EU and other markets may offer more opportunities for 2017, so investments should be focused here.

Only now have we been focused in the historical analysis of sales in time without including other factors. However, to make a deeper study to take decisions for 2017, I plotted the share in global sales for the different locations according to genre (Fig 3) and platform (Fig 4).
Fig 3 shows that consumers had different preferences in the type of genre. For example, the most popular games for American customers are fighting and shooter (41%), while for Europe, racing and strategy games presented the higher share (70 and 64%); Japanese consumers prefer simulation games (70%) and other regions popular choice are platform games (19%). Therefore, according to these results, I recommend allocating higher inversions in the more popular games; in this way, we could have fewer risks and maintain high revenue for 2017.
In addition, to this, I would also like to point out that Europe as well that others (in less proportion), present relevant shares in most genres. This result shows an opportunity for 2017 to launch several diverse games in these two regions.

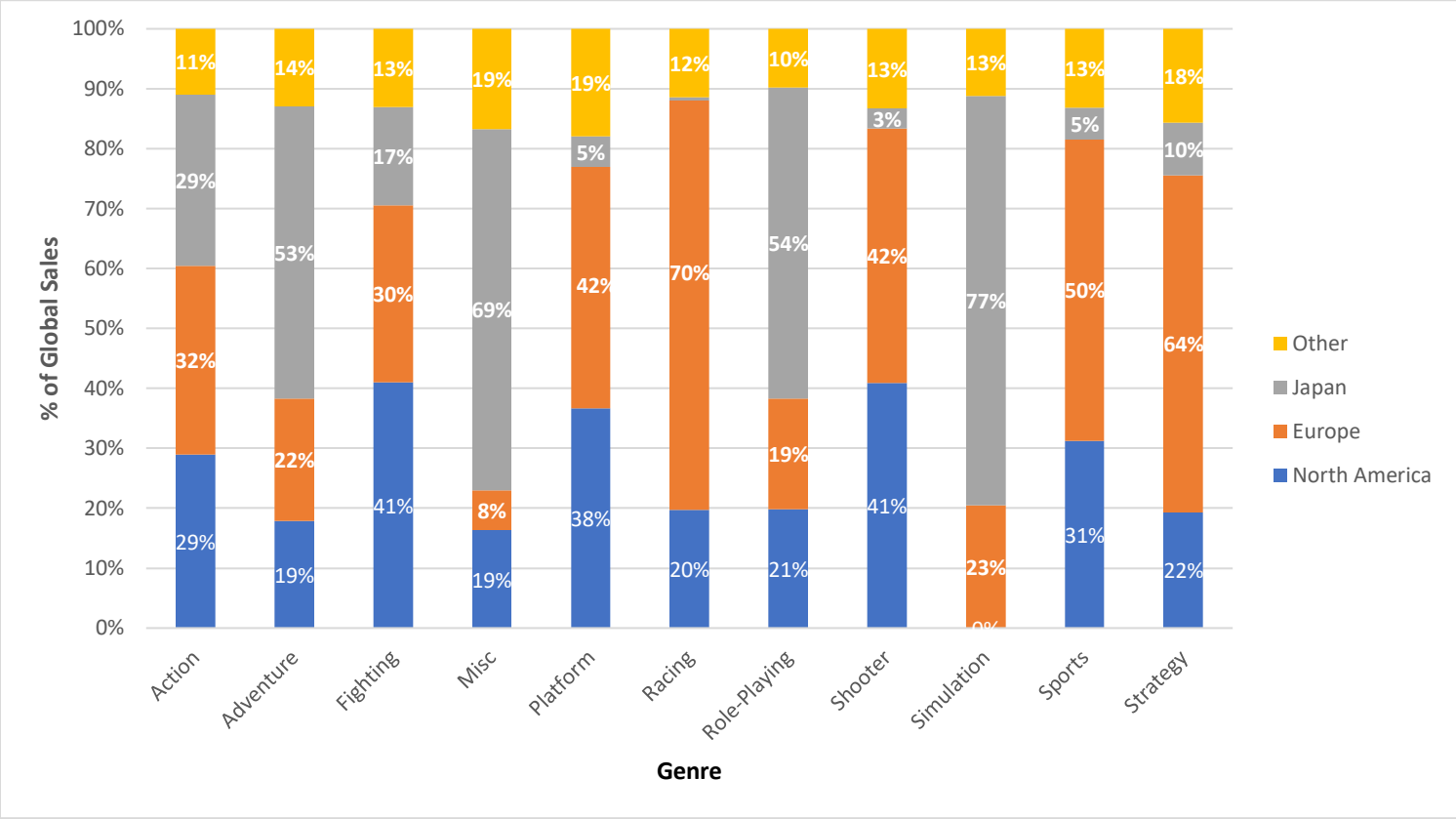

Fig 3. Distribution of sales for different Genres in 2016

Besides genre, it is relevant to analyze the share in sales according to the platform type (Fig 4). Here, again Europe market showed high platform diversity, with PC being the most popular one (61%). On the other hand, North America's most popular platform was Xone (54%); in this case, we can also find high shares on most platforms. In the case of Japan, PSV, with 81 %, showed the highest popularity; in the case of Others, again with a 15% share, PS4 was the most popular platform. According to these results, GameCo budget for 2017, should continue investing in these seven types of platforms to secure future gains.

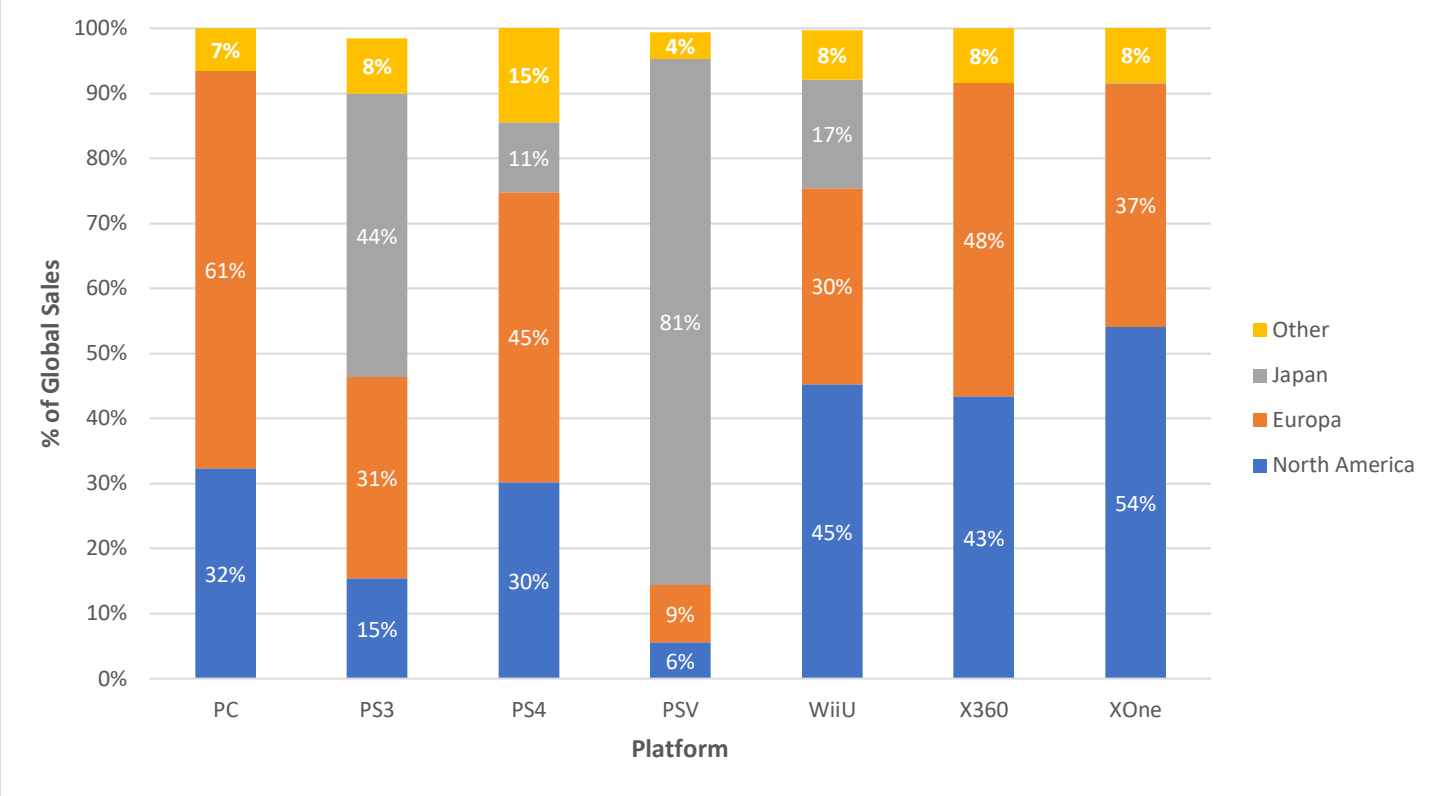

Fig 4. Distribution of sales for different platforms in 2016

Limitations and Bias

Missing data was handled by imputing average values; therefore, the actual market situation for these points can be under or overestimated. Bias regarding grouping several regions as "Others" can negatively impact the company's image.

Conclusion

Sales did not remain the same over the years for the different locations. Therefore, the budget for 2017 should be distributed regarding areas with positive trends, such as Europe and Others. In addition, GameCo should be careful in the inversions of American and Japanese markets, which with negative correlations, can be very risky for 2017. Also, for 2017, I recommend continuing to invest in more popular genres and platforms to secure sales. Finally, for better use of this report, data limitations, as well as bias, should be taken into account for future decisions.