Project Reflections

GameCo's Goal	Distribute the marketing budget for 2017 among the regions to maximize return on investment.
Baseline Expectation	Game sales for the various geographic regions have stayed the same over time.

Step 1

In the first step of the analysis, I cleaned the data set by removing duplicate rows, empty columns, and rows that were incomplete or containing blank cells.

Next, I aggregated, summarized and filtered the data in pivot tables (sales by region in absolute and % values, sales by region and genre, etc.). The visualizations/charts used in the presentation were based on these pivot tables.

As part of the data exploration stage, I looked at the distribution of the data which showed that game sales were skewed to the right (mean > median), implying that several very popular games account for a large share of the sales.

The insights derived from analyzing the data indicated that, contrary to the baseline expectations, global sales have been fluctuating over time with the peak reached during the period 2007-2010, followed by a decline. Regional sales followed this general trend. However, when looking at the development of their shares in global sales over time, the trend lines show an even higher degree of volatility.

Regarding visualizations, firstly, I created a pivot and an associated line chart that summarized, respectively showed, the development of sales by region from 1980 to 2016. It then became clear that game sales have been varying over time and, more importantly for the GameCo management, declining after reaching the peak towards the end of the 2010s.
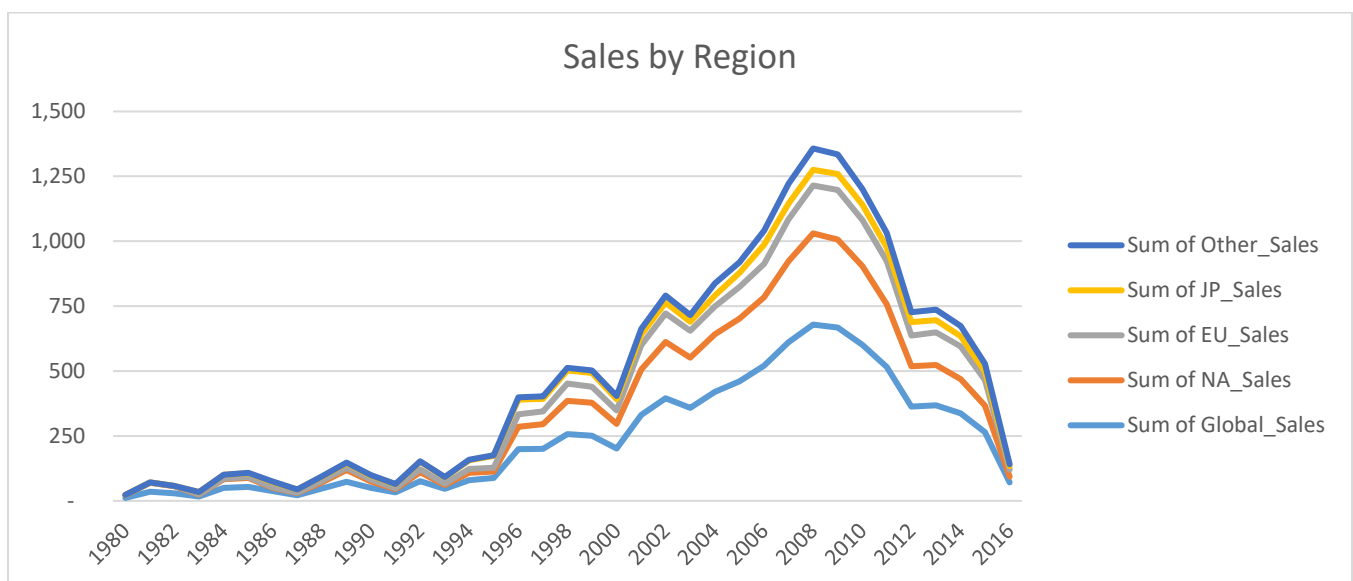

Figure 1

Secondly, I looked at how the shares of regions varied during this timeframe. Initially I assumed that North American sales would account for the largest market and stay relatively constant over time, with the balance split among the rest of the regions. This assumption was challenged by the data displayed in a line chart indicating that the share of the North American sales in global sales has in fact been fluctuating ever since the 1980s. The chart also indicates that Europe has been steadily increasing its share in total sales over time.
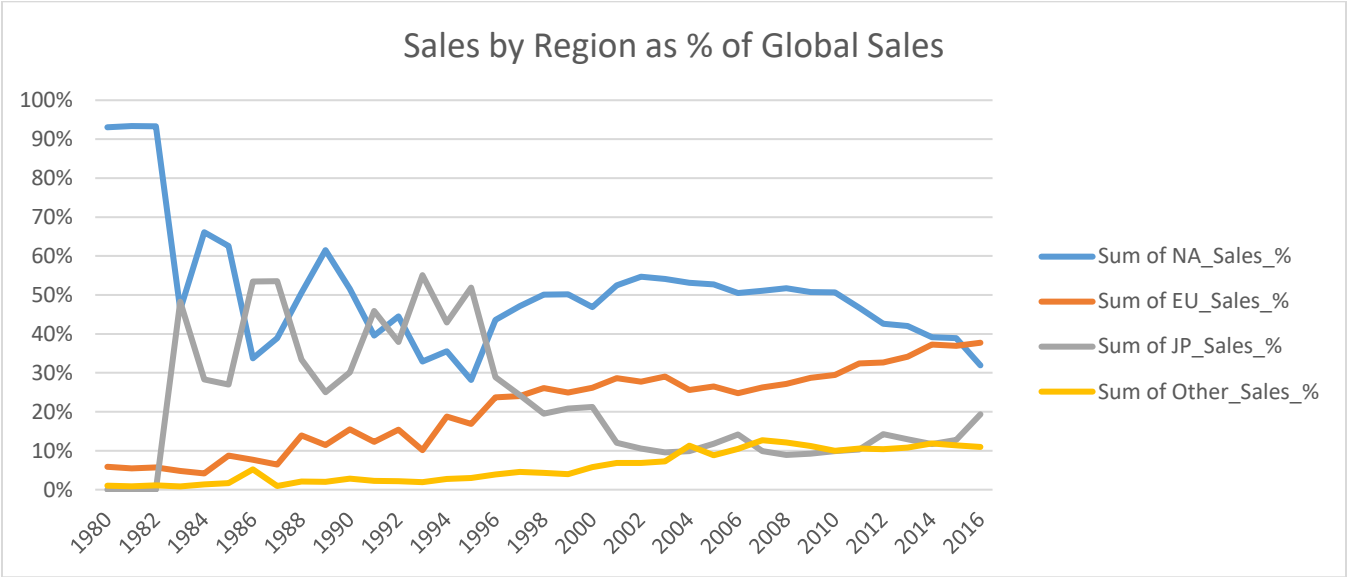

Figure 2

Further, to understand how regional sales are structured in terms of consumer preferences, I further looked at the sales by genre and region in a stacked column chart, but narrowed it down to a shorter and more relevant timeframe, i.e. past 10 years. The data behind the chart was previously summarized in a pivot table with extra calculated fields for each region as % of global sales. In North America, Shooter games are the most popular, while Japan, with a shrinking share in global sales, has developed a particular taste for role-playing games. European sales, with an increasing share in global sales, have been dominated by Racing games.
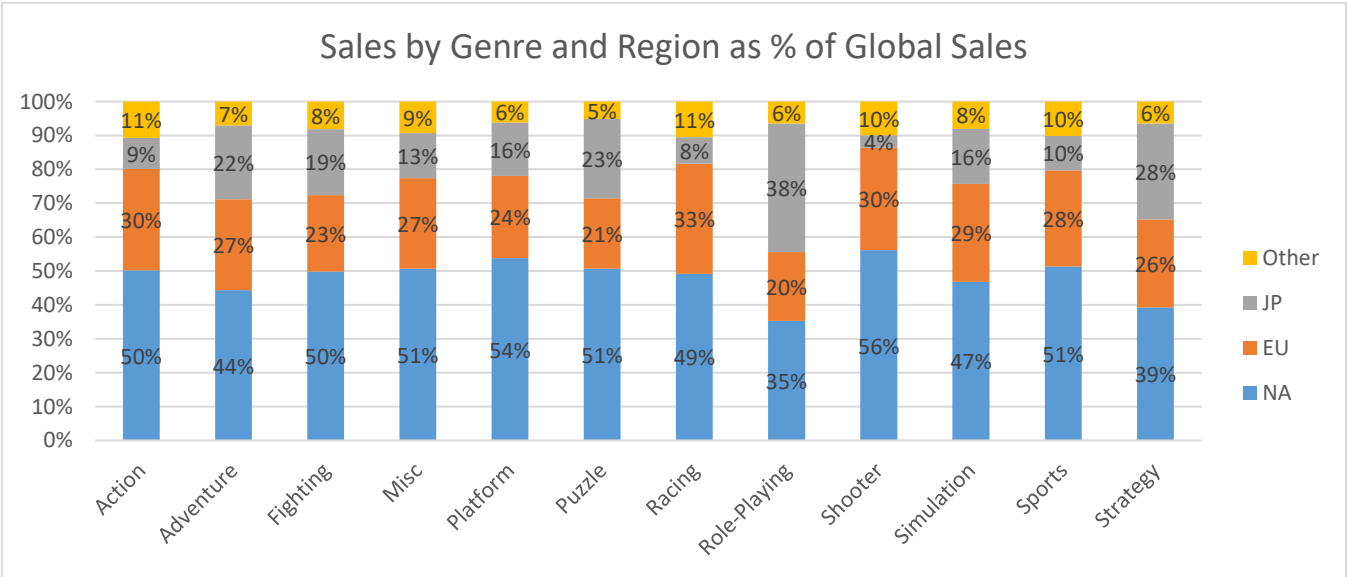

Figure 3

Step 4

For the first graph of the presentation, I chose the same line chart as in Figure 1 of Step 1, to show the trend in game sales by region, but restricted to the period 2000-2016 and excluding global sales. This type of visualization makes it easy for the audience to grasp the fact that sales have not stayed constant over time as initially expected.

Further, I used the line chart in Figure 2 of Step 1, to show how the trend in the share of the various geographical markets in global sales, but again restricted to a shorter, recent period (2000-2016). The goal was to identify the growing markets, even if in absolute terms all regions declined in the recent years.

Next, based on the Figure 3 of Step 1, I showed in stacked column graphs how the various genres fare across regions and went a step further to display the trends by region for the past 3 years. This was to get an insight of what genres have high potential in the three main regions.

Lastly, while not included in my initial reflections, as I was preparing the presentation I decided to look at the competition landscape in each of the regions for the 2-3 top preferred games to give GameCo an idea of how concentrated the markets are and whether there is room for additional market players. A market with only a few competitors might be more difficult to enter, but once there the share of the pie is larger than in fragmented markets with many competitors. As visualization, I used stacked column graphs covering each region.