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Project Reflections

GameCo's current understanding:

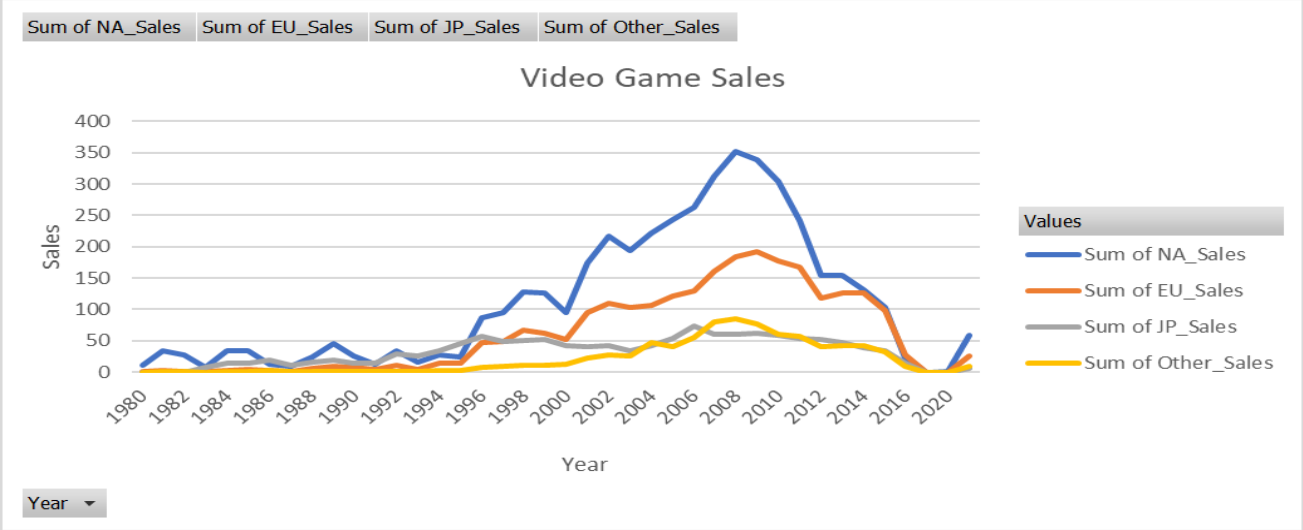
It's October 2016, and GameCo's executive board is planning the marketing budget 2017. They're assuming that sales for the various geographic regions have stayed the same over time, and they've asked you to look into the data to see if this is still true. If not, the marketing budget must be redistributed among the regions to maximize return on investment. While GameCo's executives know the video games market for different regions, they don't deeply understand the data. That's why they're looking to you to guide them through the results in a way that will be meaningful to them.

Step 1:

Looking back at the insights discovered from previous exercises, GameCo's expectation that sales will have stayed the same over time across the geographic regions is incorrect.

<u>The process that led me to these insights is seen below:</u>

1a. **How did you group or summarize the data that made this insight apparent?**

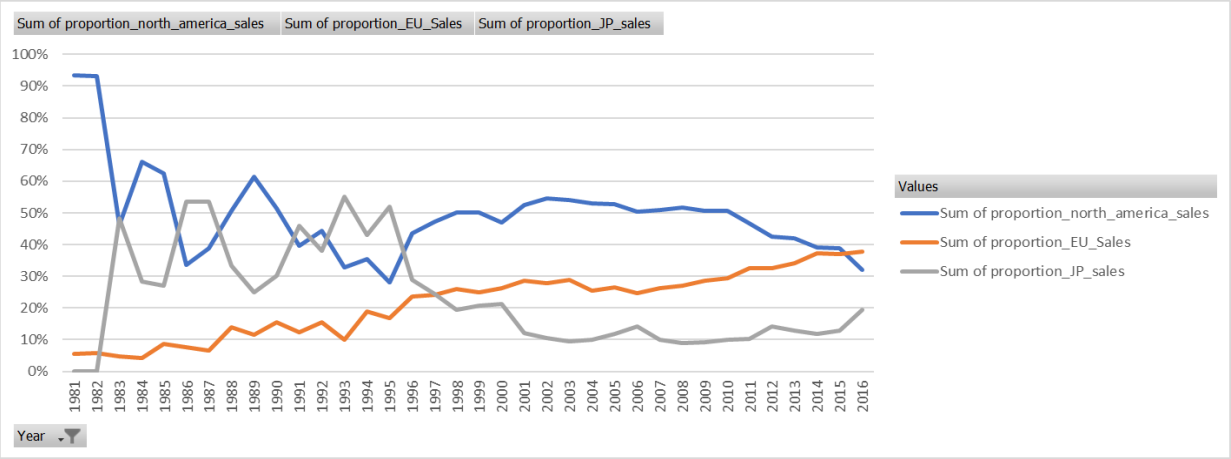


- As we can see from the visualization below, sales have been increasing for each region since 1998, with NA_Sales growing exponentially the most. However, around 2010, sales peaked for each area and started declining. In 2016, sales for each region have reached levels not seen since the early 1980s.
- Japan's sales have stayed relatively consistent (but low) compared to the other regions.
- The platform and genre preferences also did not stay the same across each region:
  - The Action genre was the most popular in North America and Europe, while Role-playing was the most popular genre in Japan.
  - The Xbox 360 was the most popular platform in North America; the PS3 was the most popular platform in Europe, and the DS was the most popular in Japan.

1b. **How did the specific summaries, groupings, and visualizations you made lead you to this insight?**

- First, I asked myself the three questions we need to know before doing anything with the data. What do we want to measure? How will we measure it? What complications may arise? So here, we want to calculate how sales perform across different geographic regions. We will estimate it by creating pivot tables and charts to see how the data trends over time. Lastly, we don't expect any complications to arise from the initial expectation.
- Then, I started to clean the data by utilizing the techniques for cleaning data, such as doing an initial data inspection, checking for blank cells, eliminating unnecessary columns, etc.
- After cleaning the data, I created a Pivot Table and broke out the data between "Year" and "Sales" for each region to see the trends throughout the years. Once I saw this data, it came to my insight. It disapproved the expectation from GameCo that sales across regions had not remained constant, as seen below with the visualization of a line chart.
- From 1995 to 2008, sales increased rapidly but then declined. North American sales had the highest numbers out of all regions, while Japan had the lowest numbers out of all areas.

2a. **How did you group or summarize the data that made this insight apparent?**



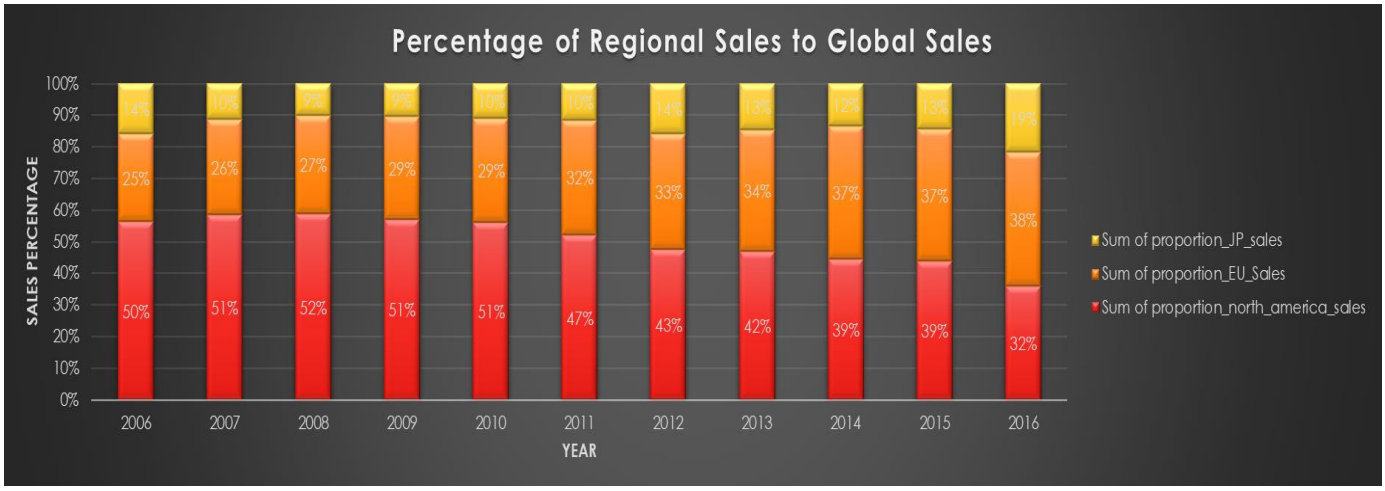
From there, I have decided to look at the proportion of sales for each geographical region towards global sales. I wanted to see which area had the highest percentage of global sales and which needed improvement. Overall, North America had 49% of the global sales, Europe had 27%, and Japan had 15%. We see for each region that none had stayed constant from 1980 until now (2016). Europe has steadily increased since 1980; Japan has sharply declined since 1995, and North America has declined since the early 2000s.

2b. **How did the specific summaries, groupings, and visualizations you made lead you to this insight?**

This visualization led me to my insight because it made me notice that the most prominent region (North America) was declining in the percentage of global sales, which made me question why this was happening. Europe's share of global sales has been steadily increasing while Japan has stayed relatively constant. Possible reasons for this happening in NA could be the expansion of digital games being released, which causes fewer platforms to be released.

Step 4:

1a. **What makes it the most suitable choice for presenting your data story to the GameCo execs?**



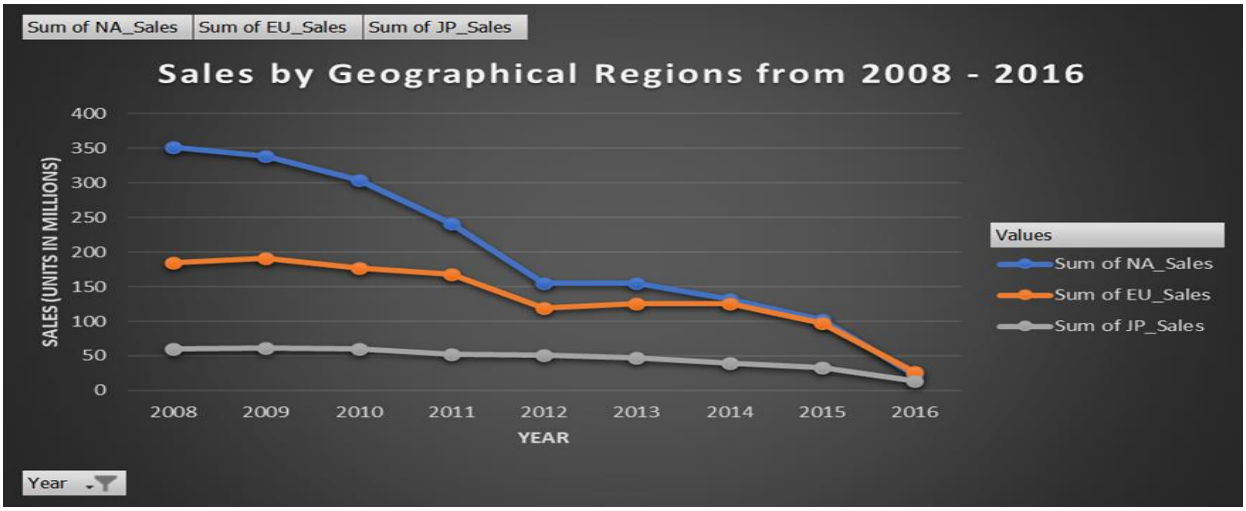
Going back to the initial expectation, GameCo's executive board is planning the marketing budget for 2017. They're assuming that sales for the various geographic regions (North America, Europe, and Japan) have stayed the same over time and are asking me to see if this holds. By picking these visualizations, if we can see where the most significant percentage of sales proportionate to global sales is going by each region, we can utilize that insight and effectively redistribute the marketing budget in 2017. For this visualization, I went back to the last ten years to see the percentage amounts for each region. Here, we can see that the percentages for each region proportionate to the global sales were not constant. For instance, for North America, we can see that it was dropping starting in 2008 (at 52%) and going all the way down to 32% (2016). For Europe, we see that it has been steadily rising from 25% in 2006 to 38% in 2016. Japan has been steadily climbing as well, reaching 19% in 2016.

1b. **How does it connect to or differ from the visualizations you worked with in step 1, which were part of your process of getting to the insight?**

The visualization below connects with the visualizations I worked with in step 1 because this demonstrates the percentages of the regional sales proportionate to the global sales, as the other one showed the trends by a line graph.

2a. **What makes it the most suitable choice for presenting your data story to the GameCo**

execs?



Total Sales (millions)	North America	Europe	Japan
2008	351.44	184.4	60.04
2016	22.66	26.76	13.66

Percentage of global sales	North America	Europe	Japan
2008	52%	27%	9%
2016	32%	38%	19%

Above, these visualizations are great to show to GameCo's executives because they display how sales have been trending downwards for the past ten years for every region. These visualizations were created by creating a pivot table with the raw data. Then, I dragged the correct fields into the right area and utilized a line graph illustrating the decline in sales from all the regions for the past several years. The GameCo executives can see below that a significant

change in the video game industry caused all the sales for each region to drop. It may have been possibly due to more games being digital (online), which results in parents not having to buy their children a Platform (PS4, XOne, etc.). Another possible reason could have been parents wanting their children to step away from the consoles (possibly due to addiction) and go outside more. The data doesn't tell us why sales have been dramatically decreasing; only assumptions can be made. In addition, I created summary stats of the total sales and total sales proportionate to global sales so GameCo executives can compare the differences between the tables.

2b. **How does it connect to or differ from the visualizations you worked with in step 1, which were part of your working process of getting to the insight?**

It connects to the visualizations in Step 1 as it shows the decline in sales. As we can see in Step 1, sales have peaked around 2008 and dropped since then. Thus, we can see above the drop since the peak for all the regions.