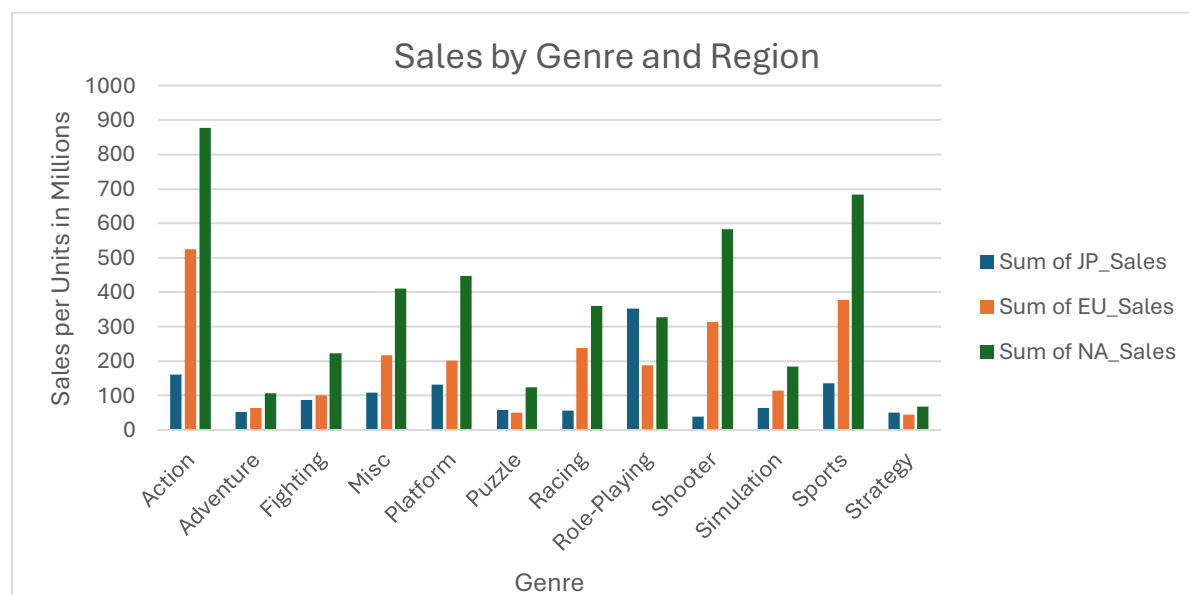


## Project Reflections

The last few exercises have provided many insights. I learned that some genre of video game is more popular in one region compared to the other, and that the different regions have very different preferences (see figures 1&2).

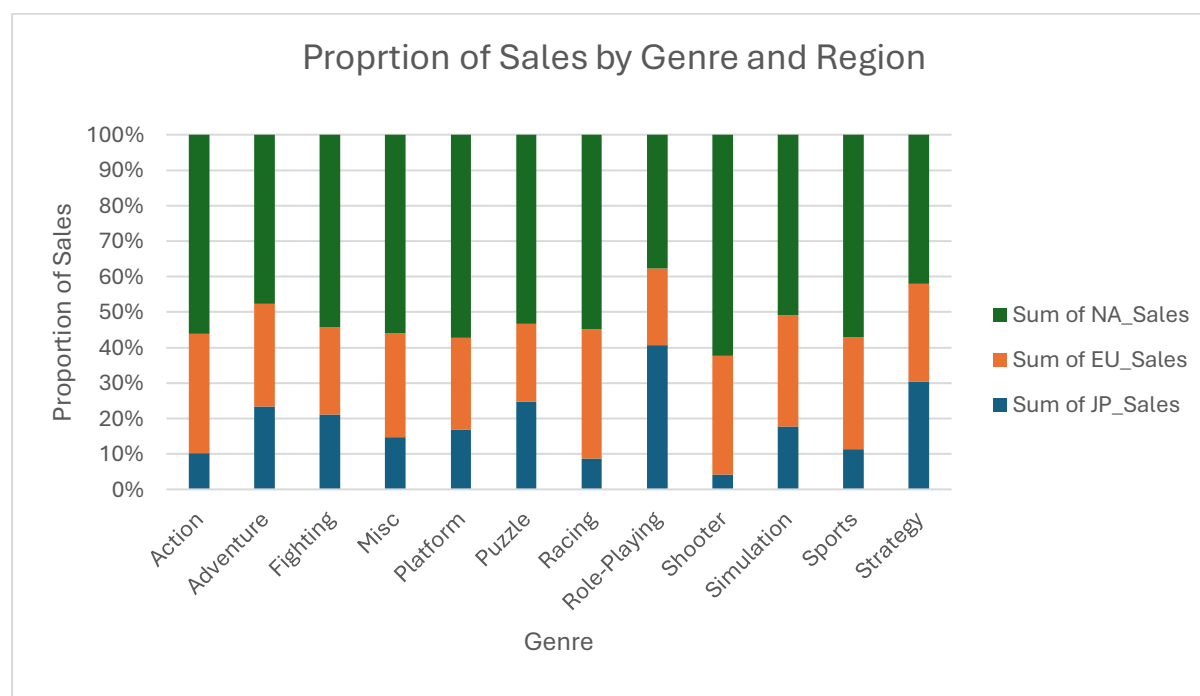
**Figure 1**

*Sales by Genre and Region*



**Figure 2**

*Proportion of Sales by Genre and Region*

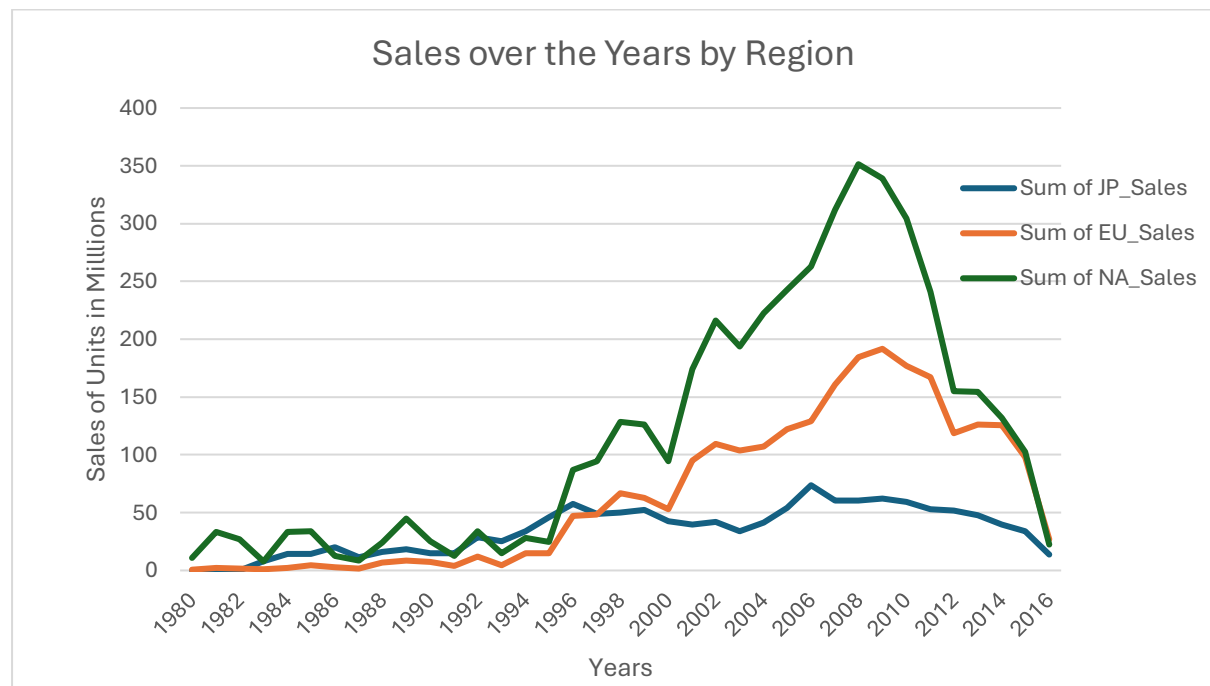


Furthermore, while the European Union and North America are similar to each other in some respects, Japan differs from both of them. For example, while in Japan role-playing games are the most popular, in North America and the European Union it is action games. Moreover, some games are only played in Japan, while others are only played in North America and the European Union. Moreover, if a game is not played in the European Union, it is very likely also not played in North America, but may very likely be played in Japan, and vice versa. While in the European Union and North America all genres have a sale proportion similar to their overall sales proportion, in Japan, the proportion of role-playing games are almost triple as high as overall proportion of game sales.

Further, in terms of sales number, which is what GameCo is interested in, there have also been a number of interesting insights. For example, North America is the biggest market, the European Union the second biggest and Japan the smallest. So far, this is not surprising, given their sizes. However, proportionate to their population size, the European Union is the smallest market, not Japan. Surprisingly, in 2016 the European Union market has become the biggest of the three, even though this is not true historically. It has overtaken the North American market by a few million sales, which is surprising, seeing that overall, meaning from 1980 to 2016, the European Union market has only been a bit more than half the North American market.

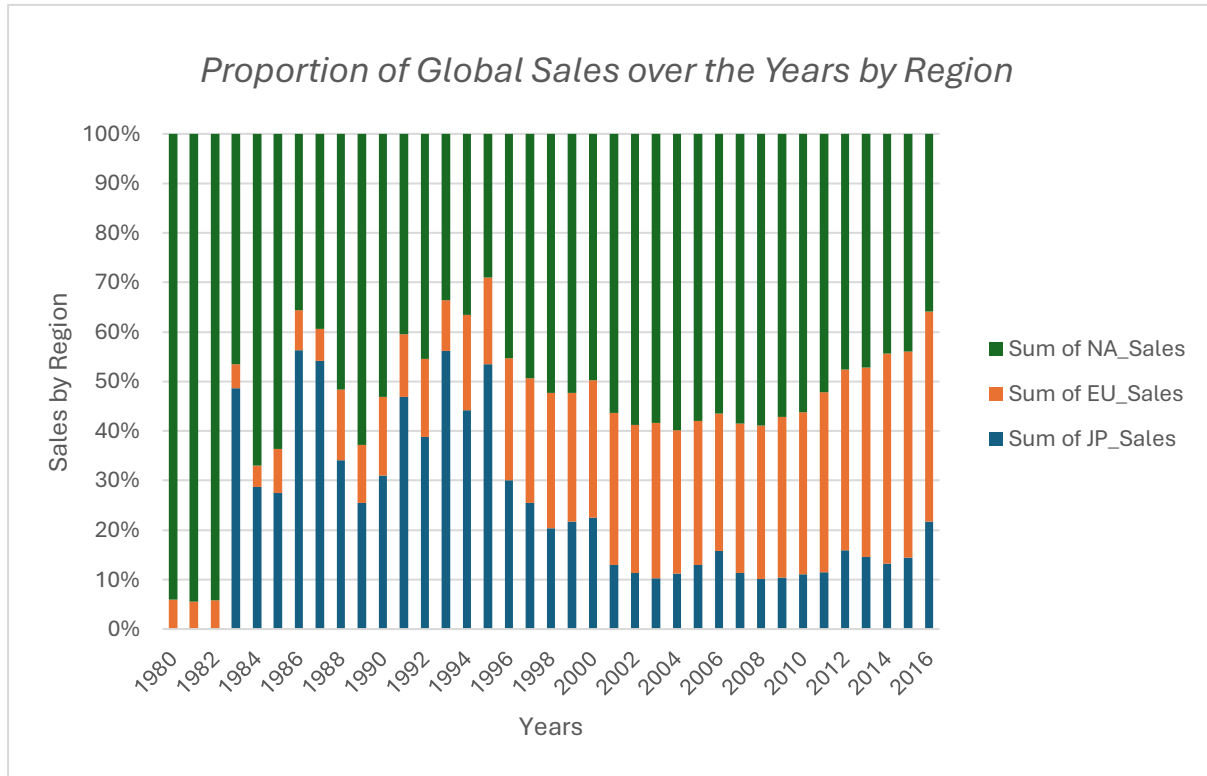
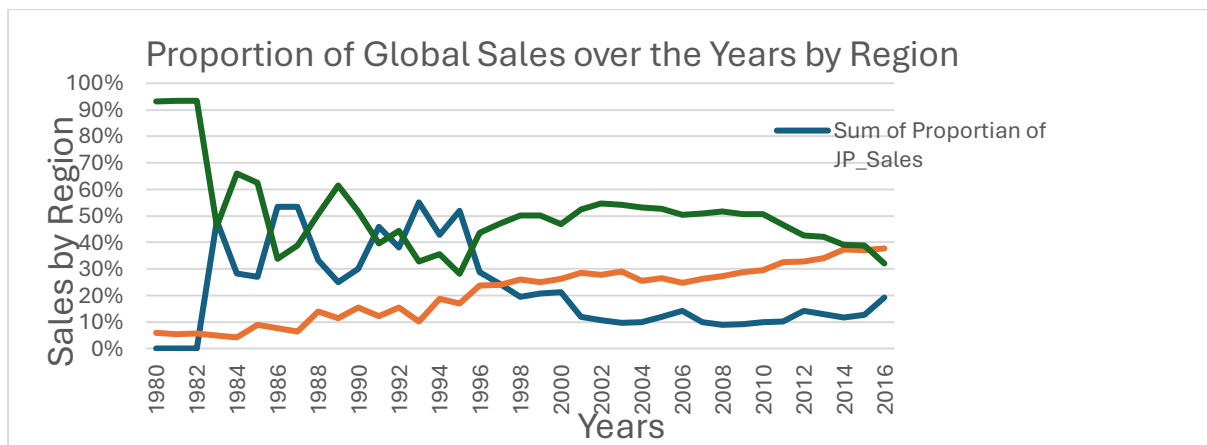
Furthermore, sales in the European Union have, in terms of proportion of global sales, seen a fairly steady increase since 1980, which is less true for North America and Japan. However, in pure numbers of sales, sales in the European Union and North America have dropped more spectacularly in the early 2000's than did sales in Japan.

Many of the insides described in the second paragraph have been achieved by making different visualisations of sales data by region and years. A line graphs of units sold, made the ebbing and flowing of sales in the different regions quite clear (see figure 3).

**Figure 3***Sales over the Years by Region*

A stacked bar chart helped me get a better picture of what the percentages of sales in each region are compared to global sales. This is what visualised in an easy to interpret manner that the European Union market has overtaken the North American Market (see figure 4). However, this fact was also demonstrated well by a line chart of percentages of sales. In order to visualise percentage sales in a line graph, percentages had be calculated first, which is not necessary when visualising by means of a stacked bar chart, as excel does this automatically when a stacked bar chart is requested (see figure 5).

I decided to use both a bar and a line chart of the same data because I felt it makes different aspects more visual. For example, the line chart shows well how the European Union sales steadily increases in terms of percentage of global sales, which is much less visible in the stacked bar chart. It could be said in general, that the line chart visualises the changes of sales over the years of the three regions in relation to each other better than the stacked bar chart. However, the stacked bar chart shows very well how big the proportion of each individual region in relation to global sales are in any specific year.

**Figure 4***Proportion of Global Sales over the Years by Region***Figure 5***Proportion of Global Sales over the Years by Region*

I have changed the colour in all charts as I found the dark green and dark blue too similar to each other which made the graphs less easy to interpret. Unfortunately, I could not find out how to custom change the colours, as I would probably use somewhat more subdued colours for a presentation.

