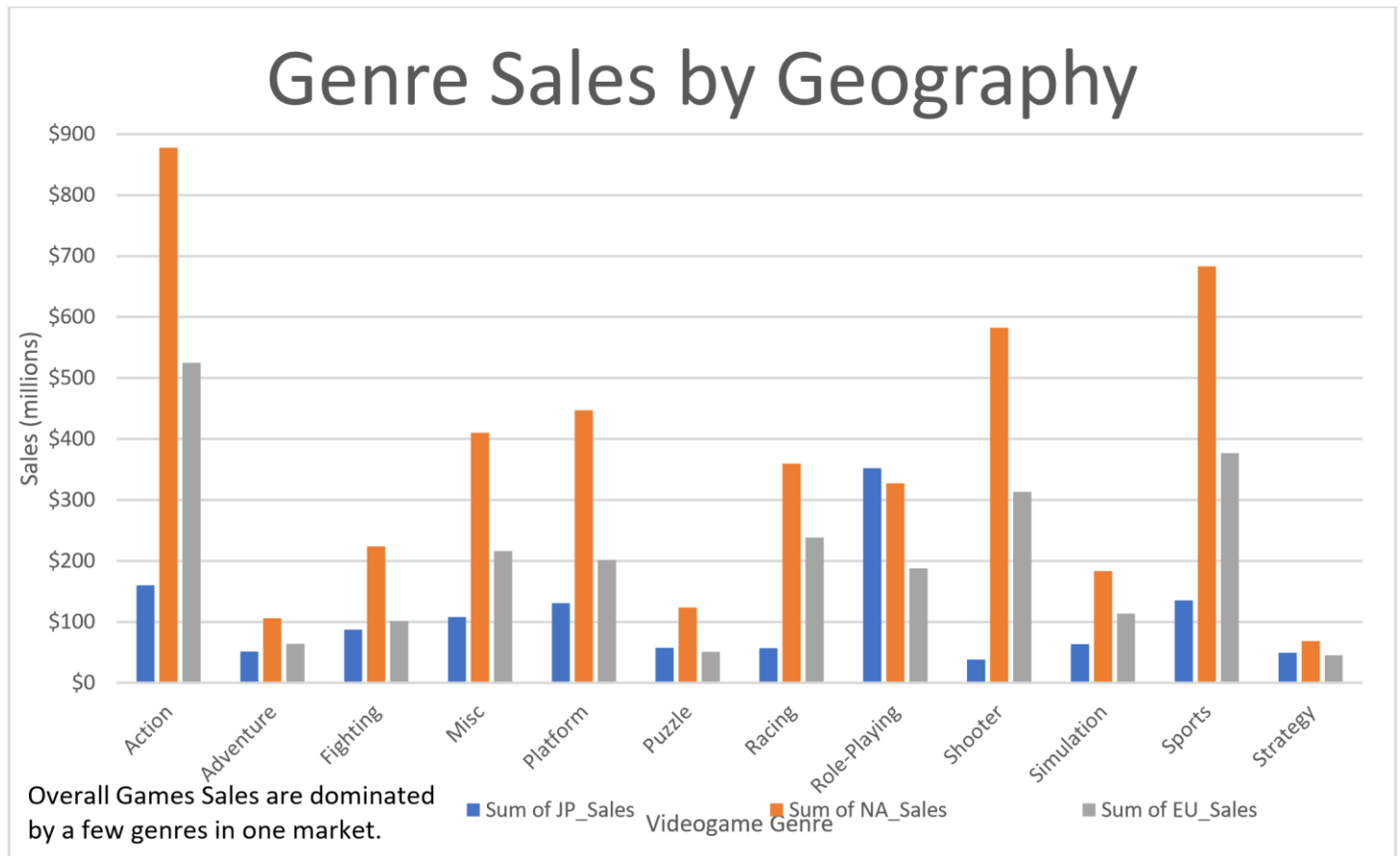


To: GameCo. Executive Committee (ExComm)  
From: Patrick Shaughnessy  
Date: December 12, 2019  
RE: [CareerFoundry](#), Introduction to Data Analytics, Final Project Reflections, Questions 2-9

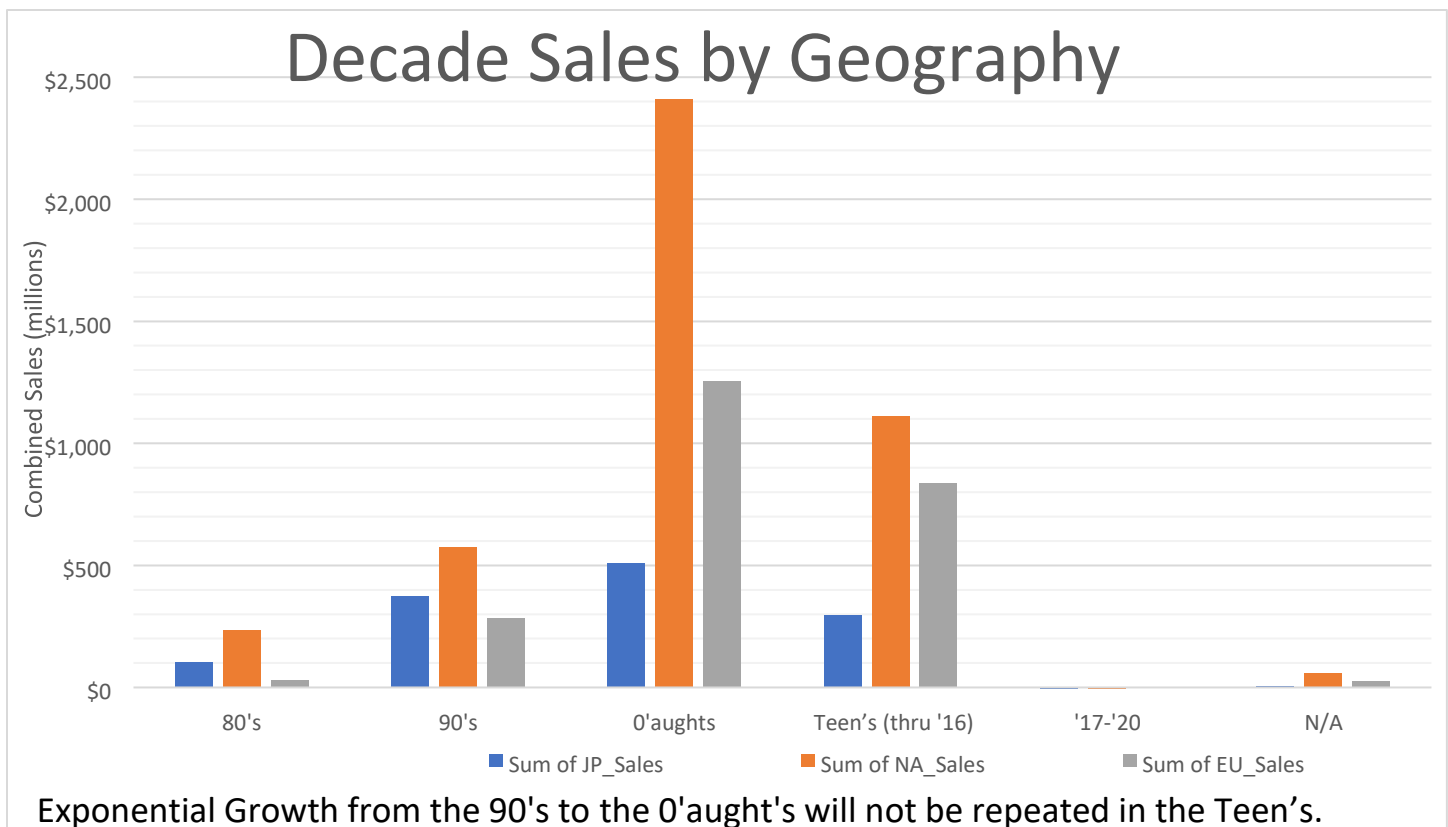
Understanding ExComm's next request, **to articulate the current understanding of how video game sales behave across geographic regions** using graphs and charts.

Before examining geography per se, let's review the games themselves. The following charts examines global sales by genre by geography. Except for Role-Playing, Japanese sales are relatively equal among all the genres. In contrast, Europe's and North America's most popular genres are Action, Shooter, and Sports.



The above chart looks at total sales by market. This analyst believes there is value in further refining this chart by time. Looking at nearly 40 individual years of data as a line chart is challenging due to compression. Therefore, I collapsed the pivot table from single years into decades (thru 2016).

The below chart details **expectations**, i.e., resources should be spent to reverse the relatively small decline in Japanese sale (\$500 million to \$300 million). However, the reality is darker: video games are literally collapsing in the North American market (\$2,400 million to \$1,100 million). For example, sales increased from circa \$200 million to a little over \$500 million in the 0'aughts and a further 5X growth in the 0'aughts only to fall by 50% in the Teen's. While my **expectation** was that growth was a possibility, my new **insight** is that in the age of ever cheaper computers, ever faster processors, to say nothing of the near ubiquitous smart phone, growth will be challenging to reach the same levels from the Teen's as the 0'aughts. My new **insight** is that North American sales will not rise at the rate they did from the 90's to the 0'aughts. GameCo. needs to address not merely the decline in any one market rather the ENTIRE market!



**Believing the two graphs above answer Question 3, “Present a visualization(s) of the data”**, let’s move on.

**Step 4:** write an explanation for why I chose this visualization and label it

I chose this visualization because I believe the charts tell a story about a) total sales by genre by geography and b) sales by decade by geography. Looking at only a sales cycle over time masks individual increases and decreases in sub-categories (genres). I was stunned to see the drop in sales from the 0’aughts to the Teen’s, even as the data is all the way through 2016, it appears unlikely that growth will return.

The first graph gives both an understanding of the amount spent by market by genre. It’s unsurprising, given its size, North America leads the market. The next step is to compare its percentage of “gamers” to other geographies. Does the North American market buy more per gamer or does it have more gamers? Additional data is needed.

The reason this approach is suitable to present to GameCo. executives is that one sees sales by decades and the trend, lower sales overall. I am unsure if I would have seen this trend of lower sales had I used only year-by-year data. If there were any doubt GameCo. should be worried about declining sales, these charts confirm sales are falling.

Regarding how this new data connects or differs from Question 1 (visualization) is difficult to answer. They connect because the 1<sup>st</sup> question was chosen to highlight the highest sales by year by geography. But Japan was not able to capitalize on those strong years. They differ because I initially believed Japan was the best market to place resources because their sales were lowest. However, now seeing the overall downward trend (**the reality**), sales support in only the Japanese market (**the expectation**) was misplaced. Sales support is needed IN EVERY MARKET.

**Step 5:** My “clear statement to draw the executives’ attention to the main insight shown in the charts” are at the bottom of each chart above.

Chart 1: Overall Games Sales are dominated by a few genres in one market.

Chart 2: Exponential Growth from the 90's to the 0'aught's will not be repeated in the Teen's.

**Step 6:** Articulate the revised understanding of GameCo.'s organization based on the data.

Rather than GameCo. concentrating on a single market to increase sales, it must investigate why sales crashed everywhere. Not mere declines, these charts suggest sales are down precipitously. In an age of ever faster internet speeds and computers, advanced technology, brighter screens, bigger (and cheaper) televisions, smarter mobiles, and more publishers, why are sales declining? Are people spending more time with family (unlikely)? Are people buying more board games (possibly)?

**Step 7:** Recommend an action that GameCo. could take.

#1: Add further insight, especially population numbers by market to understand each in sum and by capita (gamer).

#2: Expand marketing to open new markets, e.g. Hong Kong, South Korea, Malaysia, Taiwan, and, especially, China.

#3: Reserve R&D dollars to update their games using competitive analysis, customer surveys, and voice of the customer.

#4: Utilize marketing dollars to open new markets by genre, age, and gender (assuming market research support).

#5: Investigate purchases vs. rentals, on-line vs in-store, mobile phone vs. platform etc.

#6: Determine if cross-selling and cross-marketing with separate-but-related products would be beneficial.

**Step 8:** Think about how all the pieces of your presentation fit together. If necessary, revise and polish individual parts to ensure that you're presenting the GameCo. executives with a clear story.

I respectfully believe the story is ready to present. However, I welcome and look forward to feedback.

**Step 9:** Demonstrate ability to enhance charts and graphs, i.e. start basic and finish advanced.

I believe I have met this requirement to demonstrate advanced formatting, e.g. titles, footers, values, units, gridlines, and labels.

My thanks to my mentor, Kim Arispe, and tutor, Jerome Urioste, and all the staff at [Career Foundry](#).