DATA ANALYST PROJECT CASE STUDY

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INTRODUCTION

GameCo is a new video game company, which wants to use data to inform the development of new games. You've been asked to perform a descriptive analysis of a video game data set to foster a better understanding of how GameCo's new games might fare in the market.

Project Overview

DATA AND PROJECT

The data set covers historical sales of video games.

Data: source

Link: source

Project brief: source

DURATION

It took almost 4 to 6 weeks for me to complete the entire analysis.

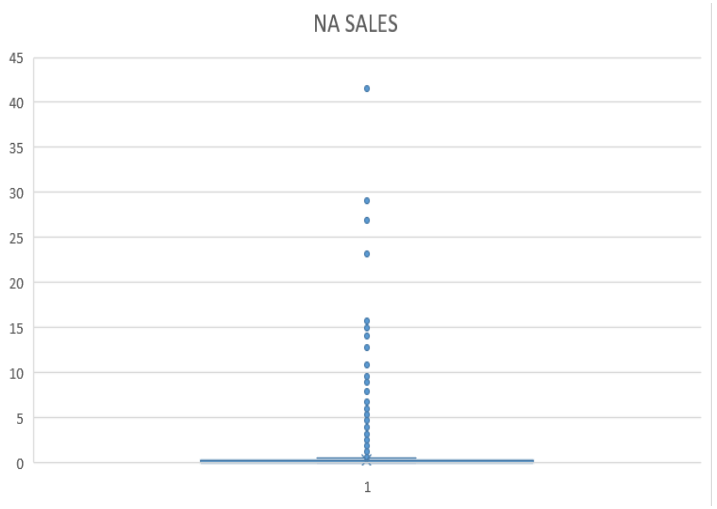
TOOLS USED

- Microsoft Excel
- Microsoft Powerpoint

TECHNIQUES APPLIED

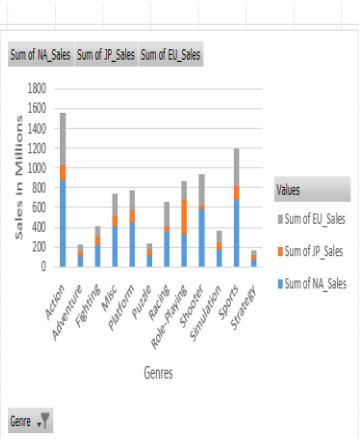
- Data sorting
- Data filtering
- Grouping and summarising the data
- Deriving newvariables
- Joining the data with VLOOKUP
- Visualizing in Excel
- Presenting results and recommendations

Rank	Name	Platform	Year	Genre	Publisher	NA_Sales	EU_Sales	JP_Sales	Other_Sales	Global_Sales
1	Wii Sports	Wii	2006	Sports	Nintendo	41.49	29.02	3.77	8.46	82.74
2	Super Mar	NES	1985	Platform	Nintendo	29.08	3.58	6.81	0.77	40.24
3	Mario Kar	Wii	2008	Racing	Nintendo	15.85	12.88	3.79	3.31	35.82
4	Wii Sports	Wii	2009	Sports	Nintendo	15.75	11.01	3.28	2.96	33
5	Pokemon	GB	1996	Role-Playi	Nintendo	11.27	8.89	10.22	1	31.37
6	Tetris	GB	1989	Puzzle	Nintendo	23.2	2.26	4.22	0.58	30.26
7	New Supe	DS	2006	Platform	Nintendo	11.38	9.23	6.5	2.9	30.01
8	Wii Play	Wii	2006	Misc	Nintendo	14.03	9.2	2.93	2.85	29.02
9	New Supe	Wii	2009	Platform	Nintendo	14.59	7.06	4.7	2.26	28.62
10	Duck Hunt	NES	1984	Shooter	Nintendo	26.93	0.63	0.28	0.47	28.31
11	Nintendog	DS	2005	Simulatior	Nintendo	9.07	11	1.93	2.75	24.76
12	Mario Kar	DS	2005	Racing	Nintendo	9.81	7.57	4.13	1.92	23.42
13	Pokemon	GB	1999	Role-Playi	Nintendo	9	6.18	7.2	0.71	23.1
14	Wii Fit	Wii	2007	Sports	Nintendo	8.94	8.03	3.6	2.15	22.72
15	Wii Fit Plu	Wii	2009	Sports	Nintendo	9.09	8.59	2.53	1.79	22
16	Kinect Adv	X360	2010	Misc	Microsoft G	14.97	4.94	0.24	1.67	21.82
17	Grand The	PS3	2013	Action	Take-Two In	7.01	9.27	0.97	4.14	21.4
18	Grand The	PS2	2004	Action	Take-Two In	9.43	0.4	0.41	10.57	20.81
19	Super Mar	SNES	1990	Platform	Nintendo	12.78	3.75	3.54	0.55	20.61
20	Brain Age:	DS	2005	Misc	Nintendo	4.75	9.26	4.16	2.05	20.22
21	Pokemon	DS	2006	Role-Playi	Nintendo	6.42	4.52	6.04	1.37	18.36
22	Super Mar	GB	1989	Platform	Nintendo	10.83	2.71	4.18	0.42	18.14
23	Super Mar	NES	1988	Platform	Nintendo	9.54	3.44	3.84	0.46	17.28



Column1	Column2	Column3	Column4	Column5	Column6
	MEAN		MEDIAN		MODE
NA Sales	0.26		0.08		0
EU Sales	0.15		0.02		0
JP sales	0.08		0		0
Other Sales	0.04		0.01		0
Global sales	0.54		0.17		0.02

Row Labels	Sum of NA_Sales	Sum of JP_Sales	Sum of EU_Sales
Action	877.83	159.95	525
Adventure	105.56	50.75	64.07
Fighting	223.59	87.35	101.32
Misc	410.3	107.76	216.02
Platform	447.05	130.77	201.63
Puzzle	123.78	57.31	50.78
Racing	359.42	56.69	238.39
Role-Playing	327.28	352.31	188.06
Shooter	582.6	38.28	313.27
Simulation	183.31	63.7	113.38
Sports	683.35	135.37	376.85
Strategy	68.7	49.46	45.34
Grand Total	4392.77	1289.7	2434.11



THE PROCESS

1. THE DATA PREPARATION PHASE

To streamline the Video game sales data, I conducted a thorough scan for duplicates, missing numbers, and other anomalies. I subsequently eliminated extraneous columns and duplicates from the data set.

2. THE ANALYSIS PHASE

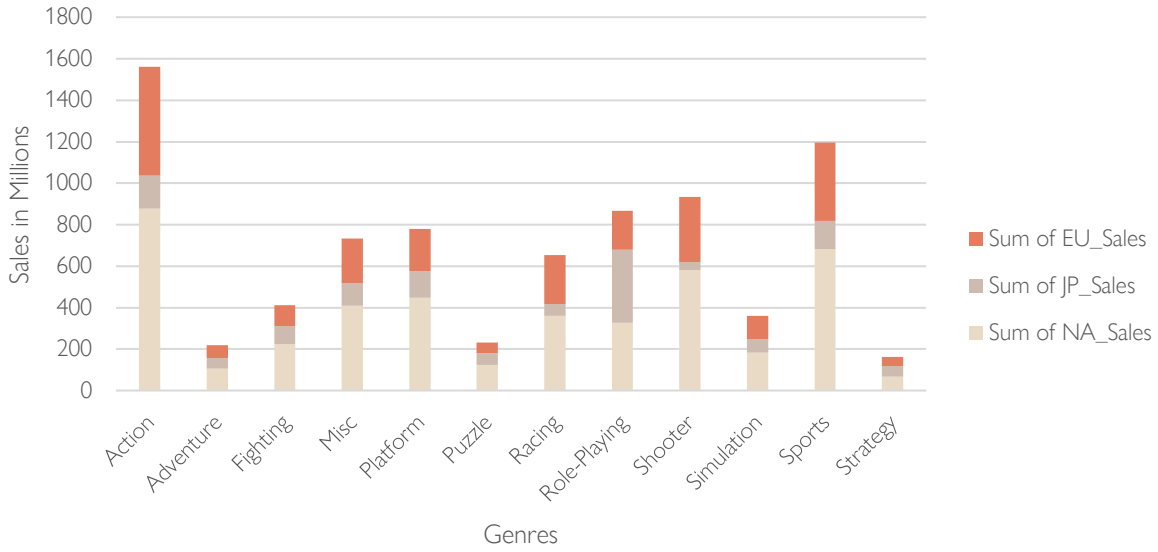
Proceeding with my additional investigation was easier as the management team had already answered all my queries. I created separate pivot tables for each instance and performed a deeper analysis.

3. THE RESULTS

Finally, after all the analysis the final presentation was created using PowerPoint, and the visualizations were created using Excel. The stakeholders were advised based on the results of the analysis with a clear disclaimer regarding the limitations of the data.

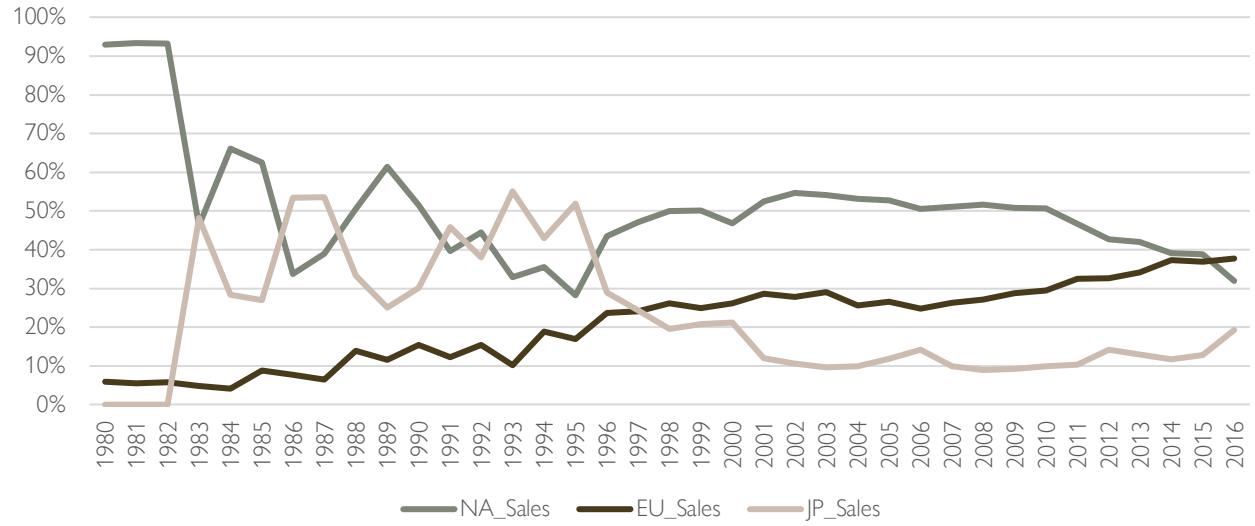
ANALYSIS

The best-performing Genre



- Based on the stats the overall best-performing game is Action Genre. Apparently, this is the most-sold game in NA from the 1990s to 2012 contributing to the majority of the Global sales.

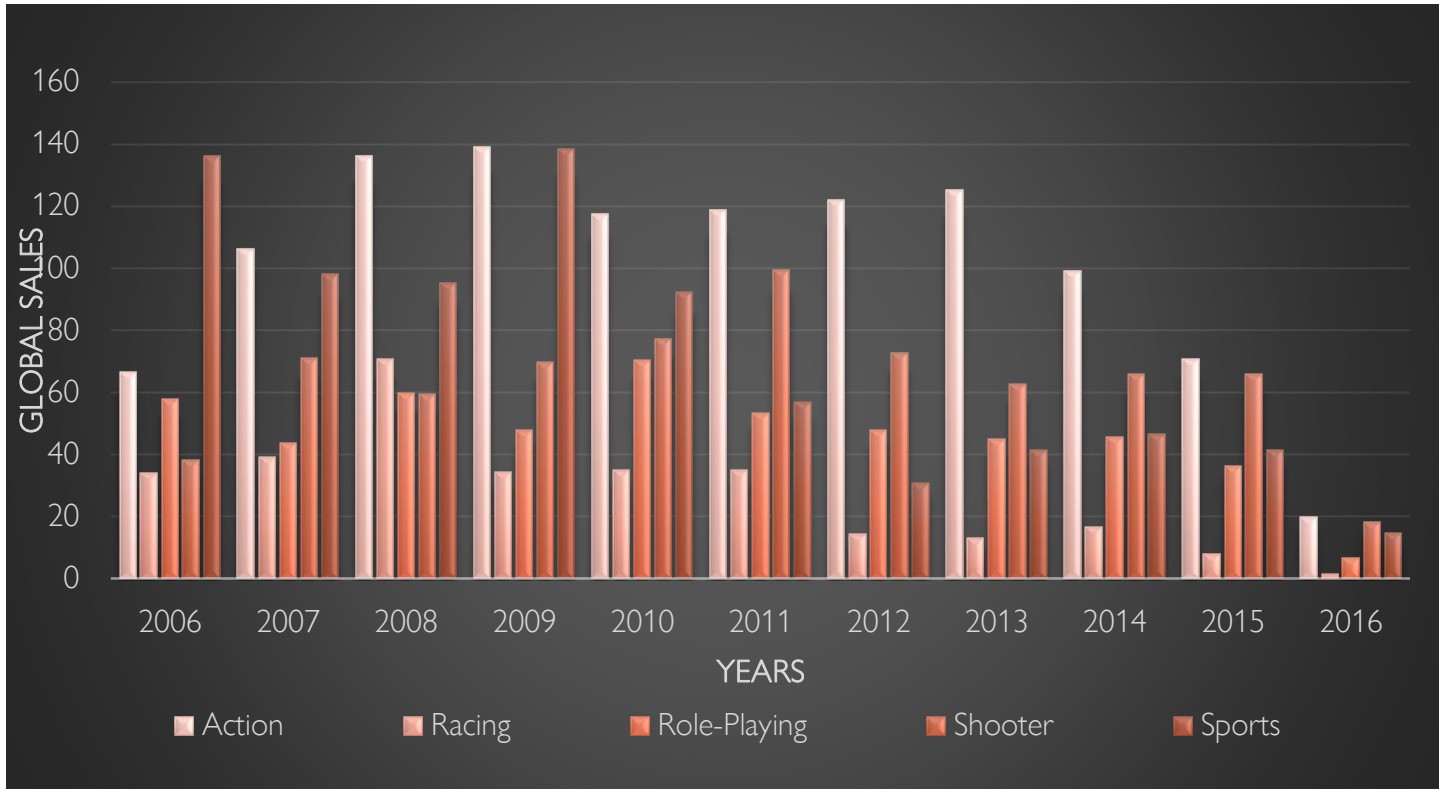
Percentage of sales globally



- The NA has the largest sales globally for Shooter games.
- EU sales have slowly peaked since 1994 and in the last 2 years, it has crossed the NA American sales globally.

ANALYSIS

The Difference in sales for the last 10 years



- Since 2006, the major money-maker genres globally are – Action, Racing, Role-playing, Shooter, and Sports.
- Since 2010 action games sales have decreased drastically. Now the question arises what made its sales dip? Are there any external factors or due to newer trends?
- But still the percentage of global sales has been secured by the increased sales of other games.

RETROSPECTIVE

WHAT WENT WELL?

I was surprised to discover the extensive range of functions that Excel offers to make tasks easier and more efficient. Upon learning that it is the most powerful tool for data analysis, I delved deeper into it.

CHALLENGES FACED?

When I was learning Excel, one of the biggest hurdles I encountered was practicing and memorizing the complex formulas. With so many functions to keep in mind, it was difficult to remember them all at once. Additionally, I struggled with pivot tables at first, but with practice, I was able to become more proficient with them.

RECOMMENDATIONS

- More focus should be given to why the high-selling genre “action” has reduced sales now
- And concentrate on the other high-selling genres.
- Focus on the recent 6% hike in sales in Japan last year may help us to find which games have started to boom.
- Create new games based on the regions and the newer trends.
- Marketing campaigns and promotions can be done to bring back interest in youngsters towards video games will gradually help in improvising sales.

Thank you

The Link to the Final Presentation

Click here

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