

Phase 3: Queries and Results

Question 1 Results

We wanted to investigate how the geographical location affects the popularity of video games and if it has been the same for the past 2 decades. We define the popularity of video games by the total sales coming from each region. We made queries that showcase the number of game units and number of unique games sold in each region released every year. We turned our data into graphs so it can be easily analyzed.

Table 1: Total Sales in All Regions per Year of Release

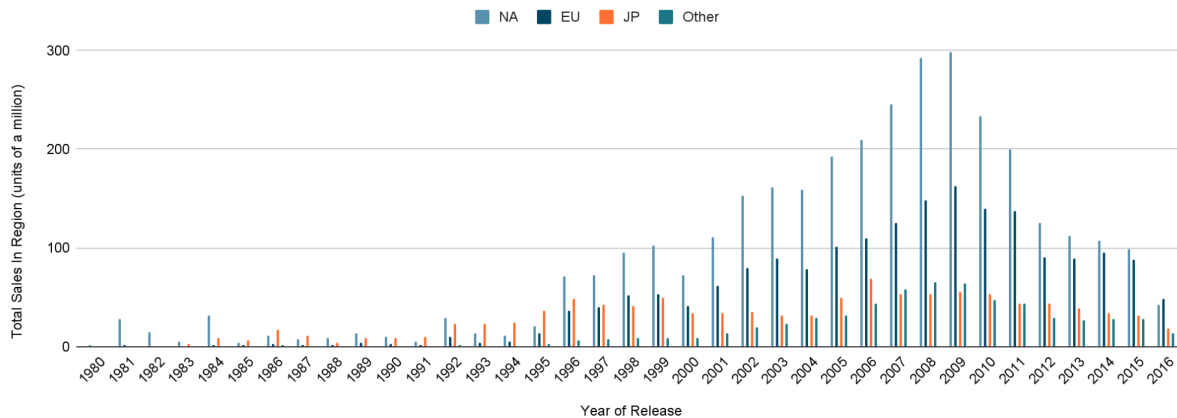
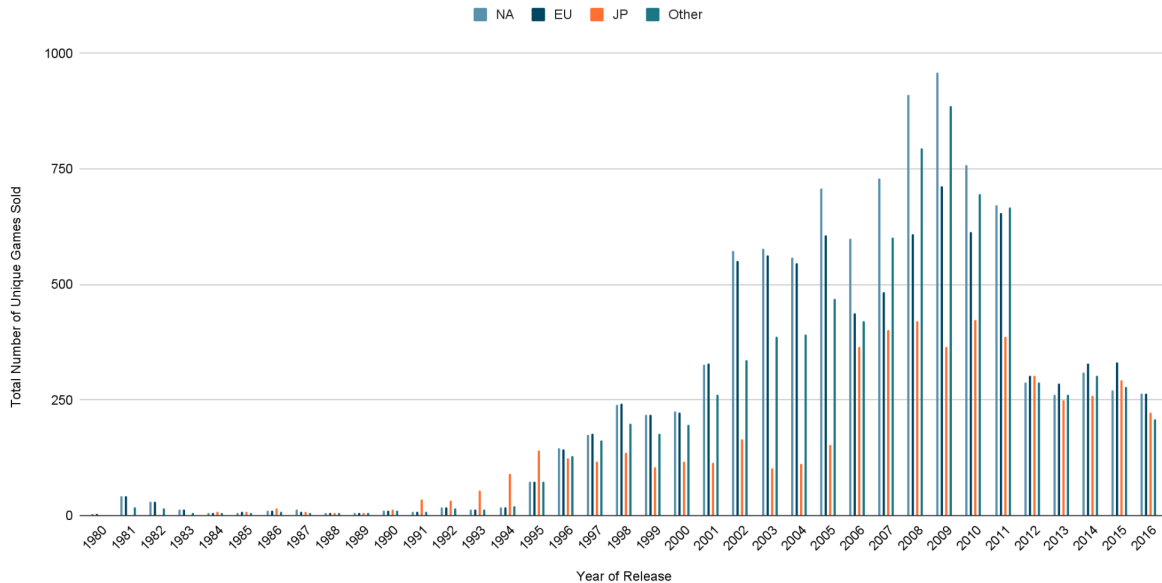


Table 2: Total Number of Unique Games Sold Per Region



Through our observation, we found out that in most of the years, NA has sold the most number of game units. The results are more diverse when it comes to the number of unique games sold as EU, JP, and NA are top regions for different years in Table 2. We can observe that in the first 2 decades, Japan and NA were on almost equivalent standings when it came to total number of game units sales and number of unique game sales; however, in the later 2 decades, NA dominated both categories.

Taking into account the population density of each region, we can conclude that in the first two decades, video games were only relatively popular in Japan and NA. As we moved towards the 2000's, we can see clearly that the number of game units and unique games sold drastically increased in every region. Despite the rising global popularity of video games, we can still conclude that geographical location has an impact on the popularity of video games since the top region in total sales of game units and unique games is consistently NA for most years.

Question 2 Results

Next, we examined if specific genres of games are more popular on certain platforms. Looking at the table below, we can find which genres are the most popular on certain platforms.

Table 3: Top Genres per Platform and their Average Global Sales

genre	platform	mostsales
Platform	2600	1.61333333333333
Adventure	3DO	0.06
Sports	3DS	0.970363636363637
Platform	DC	1.27
Shooter	DS	0.759818181818182
Role-Playing	GB	4.51947368421053
Role-Playing	GBA	0.920571428571428
Simulation	GC	1.08846153846154
Platform	GEN	1.84285714285714
Platform	GG	0.04
Strategy	N64	1.43142857142857
Shooter	NES	5.08857142857143
Fighting	NG	0.13625
Shooter	PC	1.32290849673202
Role-Playing	PCFX	0.03
Platform	PS	1.00107142857143
Fighting	PS2	0.550947867298578
Shooter	PS3	1.20447368421053
Shooter	PS4	1.6415652173913
Sports	PSP	0.604705882352941
Shooter	PSV	0.81
Action	SAT	0.43
Platform	SCD	1.5
Racing	SNES	1.49888888888889
Adventure	TG16	0.14
Role-Playing	WS	0.23
Sports	Wii	0.906859504132232
Racing	WiiU	7.09
Shooter	X360	1.17949494949495
Sports	XB	0.555593220338983
Shooter	XOne	1.72859649122807
(31 rows)		

We wanted to see if some genres were not very popular to begin with, which would affect their sales in general. For example, Adventure games in Table 3 are not very popular in general, having the lowest average global sales by genre. This makes sense why these types of games are not preferred on many platforms. However, Fighting, Role-Playing and Sports type games don't have the highest global sales average out of all genres. Yet, they come to have the highest sales for several platforms. This can suggest that these types of games are preferred on 3DS, NG, PSP, PS2, Wii, and the Xbox.

Table 4: Average Global Sale of All Publishers by Genre

genre	sales
Adventure	0.174396177237185
Puzzle	0.334086444007859
Strategy	0.250032467532468
Role-Playing	0.594207562349154
Simulation	0.423802631578947
Misc	0.422549277266753
Fighting	0.537562674094707
Racing	0.611278269419861
Sports	0.552142857142855
Shooter	0.779757462686565
Action	0.439719199719196
Platform	0.787351778656125
(12 rows)	

Looking at Tables 3 and 4, we also note that the average sales for platform games in Table 3 is around 0.787 million units. However, we can observe that platform games were the most sold on the 2600 console (Table 4 row 1). In fact, the average sales for platform games on the 2600 console was 1.61 million units, which is twice more than the average sale of platform games across other consoles (Table 3 last row). This indicates that the 2600 console made platform games more popular and people enjoyed platform games more when they were on the 2600.

Below is a section of the table -- average global sales of each genre on each platform. We are not including the whole table here because it contains 293 rows.

Table 5: Section of Average Global Sales of Every Genre on Every Platform

genre	platform	avg
Simulation	3DO	0.02
Adventure	3DO	0.06
Platform	GG	0.04
Sports	NG	0.02
Role-Playing	PCFX	0.03

When we looked at the whole table that Table 5 is from, we noticed that 3DO, GG, NG, and PCFX platforms only sold games in 1 or 2 genres. This could be because only those genres were better when played on these specific platforms and perhaps these platforms were not optimized for games from other genres. As a result, only certain genres were popular enough to sell through that platform. However, we are aware of the possibility that the data is misleading since there's not enough samples of genres.

Question 3 Results

Finally, we explored how different publishers and platforms affect the sale of the games and what causes this to happen. We looked at the top publisher with the most global sales for each genre and we found that Nintendo was the top publisher for most genres except Action, Shooter, Puzzle, and Strategy games. Since there are nearly 600 different publishers, it is hard to provide a detailed analysis on every company. Therefore, we will be specifically investigating Nintendo.

Table 6: Average Sales by Nintendo Per Genre

genre	nintendosales
Adventure	1.02764705882353
Puzzle	1.14485294117647
Strategy	0.870967741935484
Role-Playing	2.88520408163265
Simulation	2.97035714285714
Misc	1.80071428571429
Fighting	3.181875
Racing	4.08918918918919
Sports	4.35444444444444
Shooter	2.7784
Action	1.42857142857143
Platform	2.98244444444444
(12 rows)	

The average game sales by Nintendo per genre (Table 6) is a lot higher than the average game sales by all companies per genre (Table 4). This suggests that the publisher can affect the sales of the games. The average game sales by Nintendo on the platforms they do the best in is also significantly higher than the average game sales for the platform.

From Table 3, we know that Sports is the top selling genre on Wii. From Table 7, we can see that Nintendo is the top selling publisher of Wii. These two observations are congruent as

Nintendo is the top selling publisher in Sports games. As a result, we conclude that people enjoy playing sports games on Wii made by Nintendo. To confirm this, we check the average critic and user score for sports games published by Nintendo and the average score of sports games on Wii. From Tables 8 and 9, the sports games made by Nintendo have high scores regardless of their platform. On the other hand, the average score of sports games on Wii is much lower than when the sports game is made by Nintendo. This indicates that people enjoy sports games on Wii when they are published by Nintendo, not just any publisher.

Table 7: Section of Publishers with the Highest Global Sales per Platform

Namco Bandai Games	WS	0.165
Nintendo	Wii	4.79443037974684
Electronic Arts	WiiU	1.596875

Table 8: Average Ratings of all Publishers for Sports Games on the Wii

avgcriticscore	avguserscore
63.33333333333333	6.86024096385542
(1 row)	

Table 9: Average Nintendo Sports Games Ratings per Platform

platform	avgcriticscore	avguserscore
3DS	73.50000000000000	7.55
DS	68.00000000000000	7.85
GBA	80.66666666666667	8.13333333333333
GC	76.80000000000000	8.24
N64		
NES		
SNES		
Wii	75.00000000000000	7.725
WiiU	66.00000000000000	6.66666666666667
(9 rows)		