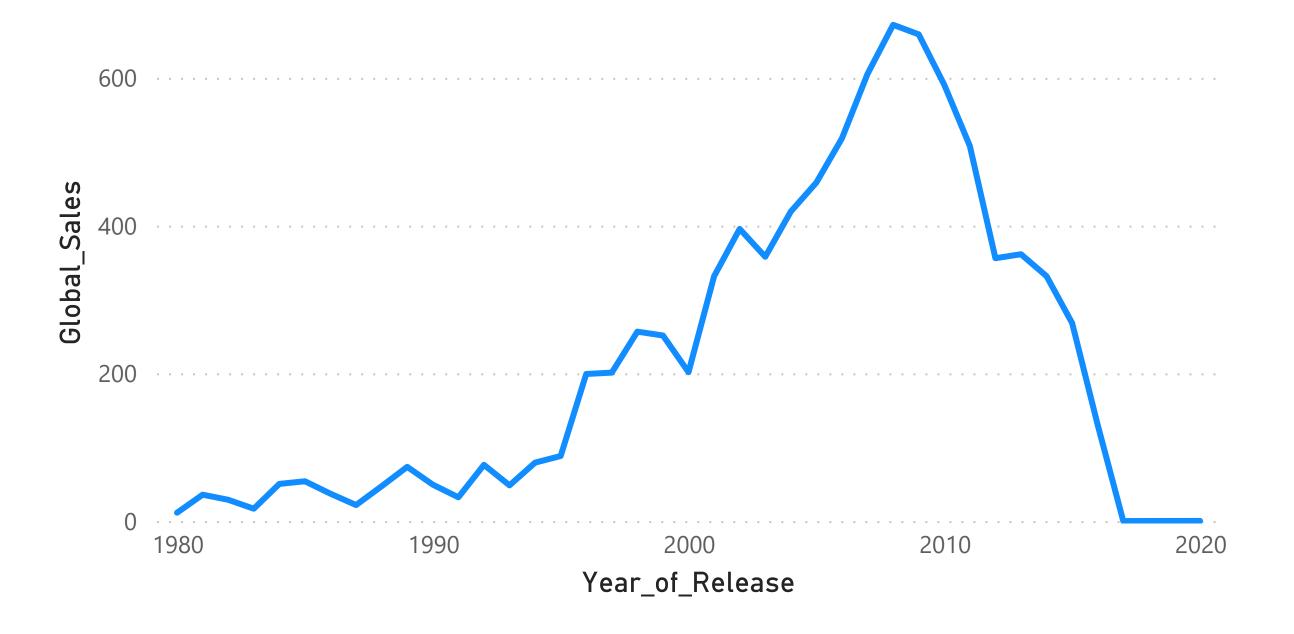
In this report, we have curated some data visualisations from the Video Games Sales industry.

From this dashboard you can see:

- The highest sales from the different publishers, platforms, developers and video game genres etc
- For more relevant data analysis, we have considered to take only data from the 10 most recent years ranging from 2010 2020. This is because data from earlier years may be irrelevant in predicting the future movements of the industry.
- The most popular video games
- The video games with highest ratings of recommendation.

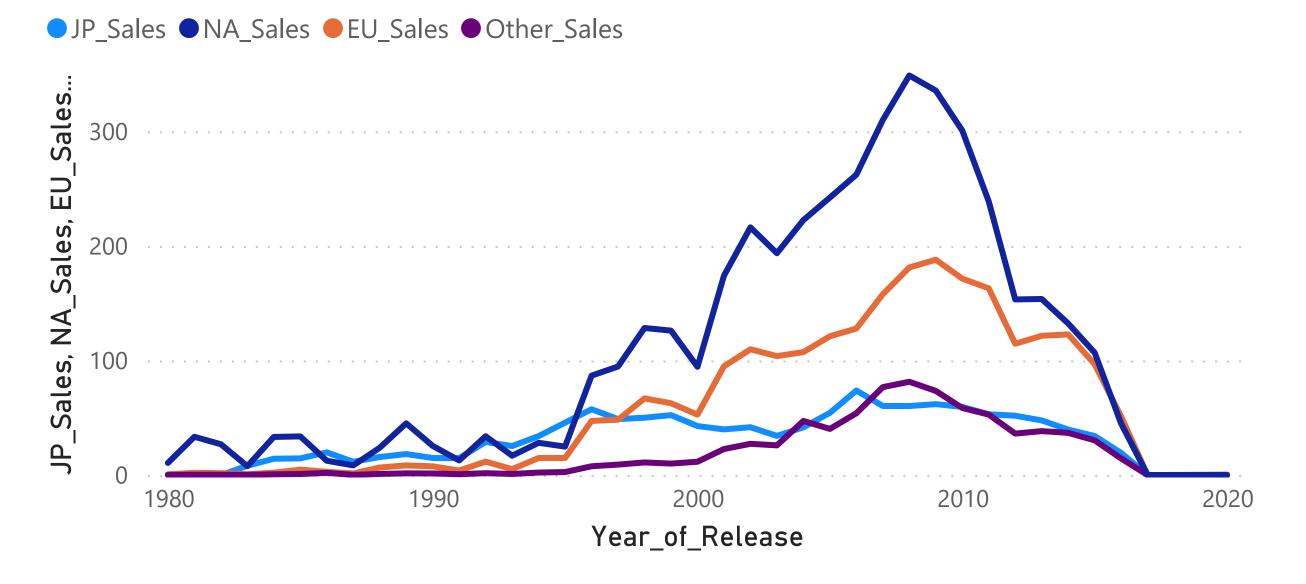
#### Global\_Sales by Year\_of\_Release



The 2 chart representing time series chart. The line chart can use to see the trend of the sales in the video games market.

The global sales by year of release chart shows that the global sales has a increasing trend from 1980 to 2008 then decreasing trend exist since 2009.

#### JP\_Sales, NA\_Sales, EU\_Sales and Other\_Sales by Year\_of\_Release



The sales in Japan, Europe, North America and other countries by year of release chart shows that the sales for all 4 category has a increasing trend from 1980 to 2008 then decreasing trend exist since 2009. It is similar trend with the global sales because the global sales is actually the summation of Japan sales, Europe sales, North America sales and other country sales.

#### **Statistical Measure for sales**

Global_Sales	Average of Global_Sales	Min of Global_Sales	Max of Global_Sales	Standard deviation of Global_Sales	Variance of Global_Sales	Median of Global_Sales
8,920.30	0.53	0.01	82.53	1.55	2.40	0.17

EU_Sales	Average of EU_Sales	Min of EU_Sales	Max of EU_Sales	Standard deviation of EU_Sales	Variance of EU_Sales	Median of EU_Sales
2,424.67	0.15	0.00	28.96	0.50	0.25	0.02

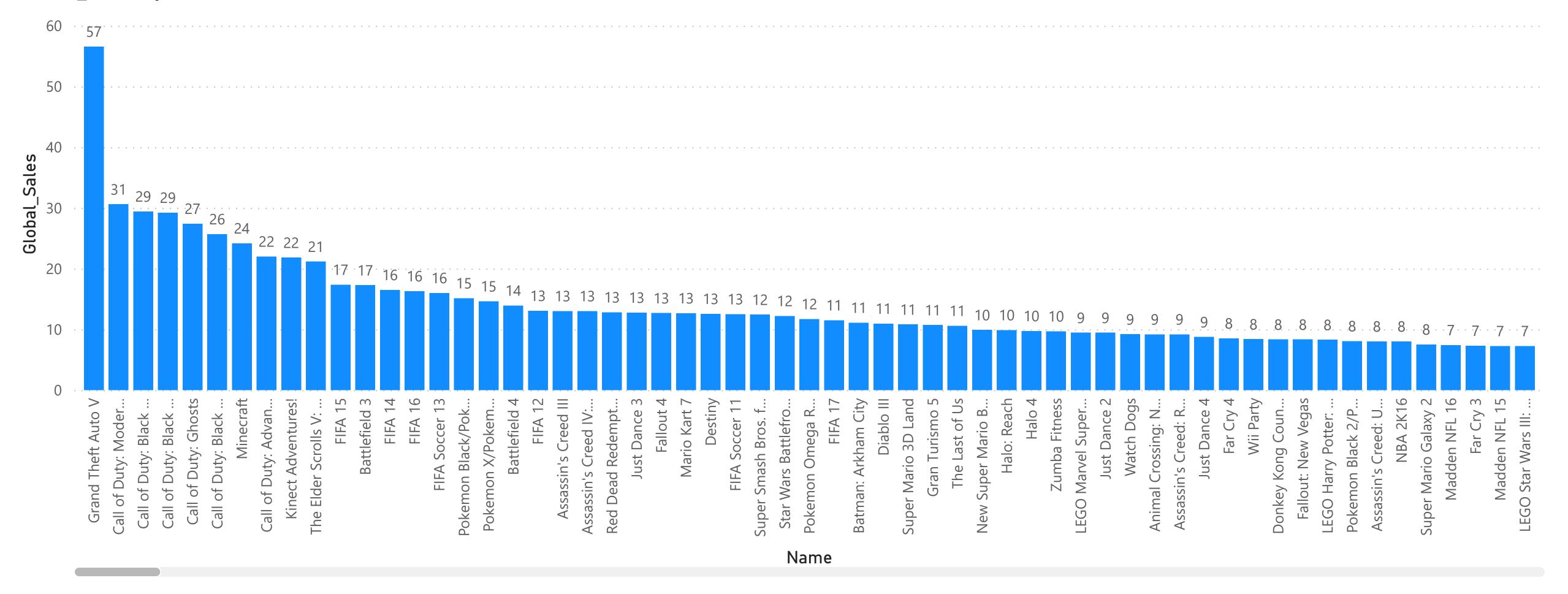
JP_Sales	Average of JP_Sales	Min of JP_Sales	Max of JP_Sales	Standard deviation of JP_Sales	Variance of JP_Sales	Median of JP_Sales
1,297.43	0.08	0.00	10.22	0.31	0.10	0.00

NA_Sales	Average of NA_Sales	Min of NA_Sales	Max of NA_Sales	Standard deviation of NA_Sales	Variance of NA_Sales	Median of NA_Sales
4,402.62	0.26	0.00	41.36	0.81	0.66	0.08

Other_Sales	Average of Other_Sales	Min of Other_Sales	Max of Other_Sales	Standard deviation of Other_Sales	Variance of Other_Sales	Median of Other_Sales
791.34	0.05	0.00	10.57	0.19	0.03	0.01

Based on the statistical measure result, the average of the global sales is 0.53 millions which means that each game is able to generate up to 0.53 millions of sales in average. It is shown that in North America, the average sales takes up the largest percentage in global sales of 49.05% which is followed by Europe at 28.3%, Japan at 15.09% and Other countries at 9.43%. This shows that North America contributes the largest sales globally.

#### Global\_Sales by Name



Y	lear_of_Release										
	Select all	2011	2013	2015	2017						
	2010	2012	2014	2016	2020						

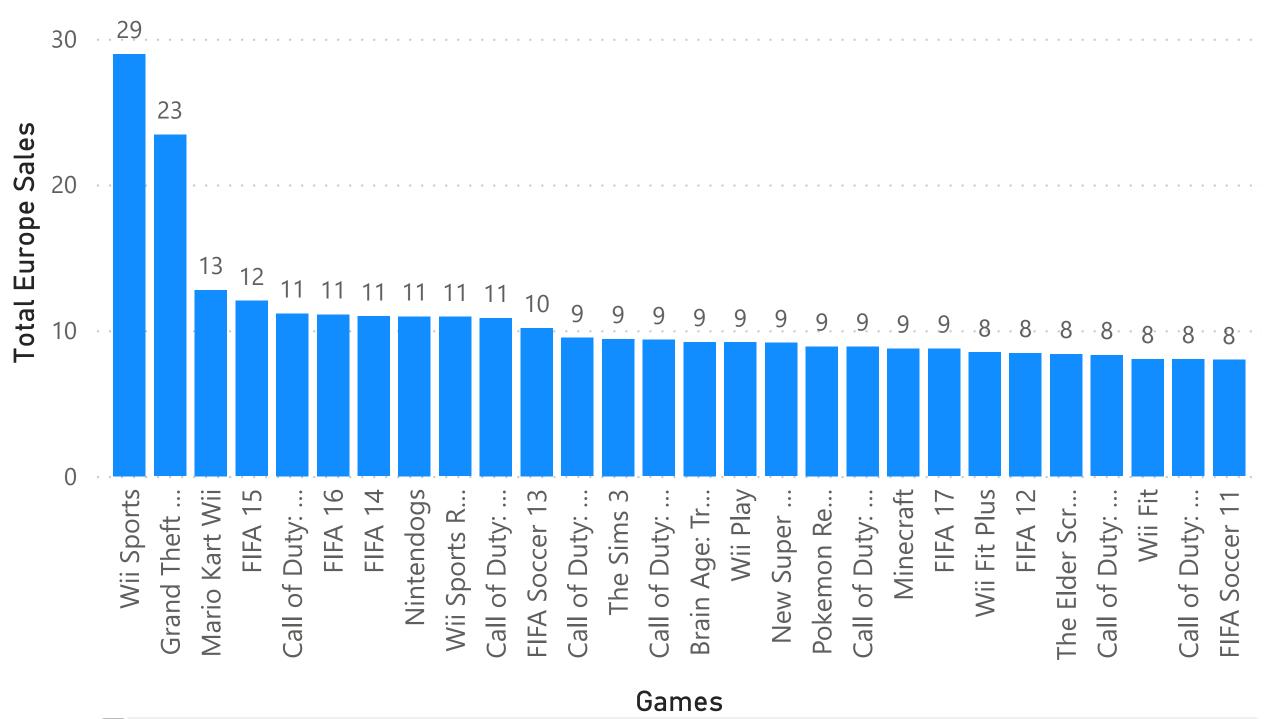
#### **Top 5 Best Seller Games in Global (1980 - 2020)**

- Wii Sports (Sales = 83)
- Grand Theft Auto V (Sales = 57)
- Super Mario Bros. (Sales = 45)
- Tetris (Sales = 36)
- Mario Kart Wii (Sales = 36)

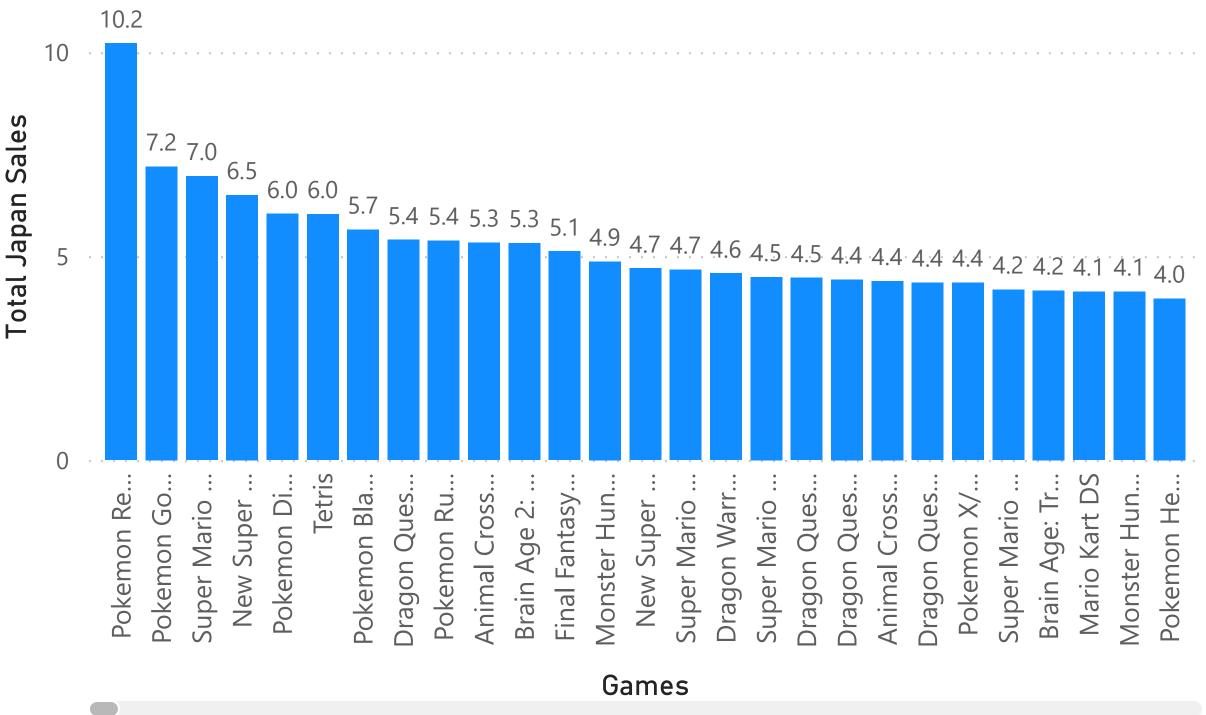
#### **Top 5 Best Seller Games in Global (2010 - 2020)**

- Grand Theft Auto V (Sales = 57)
- Call of Duty: Modern Warfare 3 (Sales = 31)
- Call of Duty: Black Ops II (Sales = 29)
- Call of Duty: Black Ops (Sales = 29)
- Call of Duty: Ghost (Sales = 27)

#### Total Europe Sales by Games



#### Total Japan Sales by Games



#### Year of Release

I	eai_oi_r	elease	
	Select all	2013	2017
	2010	2014	2020
	2011	2015	
	2012	2016	

#### **Top 4 Best Seller Games in Europe (1980 - 2020)**

- Wii Sports (Sales = 29)
- Grand Theft Auto V (Sales = 23)
- Mario Kart Wii (Sales = 13)
- FIFA 15 (Sales = 12)

#### **Top 6 Best Seller Games in Europe (2010 - 2020)**

- Grand Theft Auto V (Sales = 23)
- FIFA 15 (Sales = 12)
- Call of Duty: Moderm Warfare 3 (Sales = 11)
- FIFA 16 (Sales = 11)
- FIFA 14 (Sales = 11)
- Call of Duty: Black Ops II (Sales = 11)

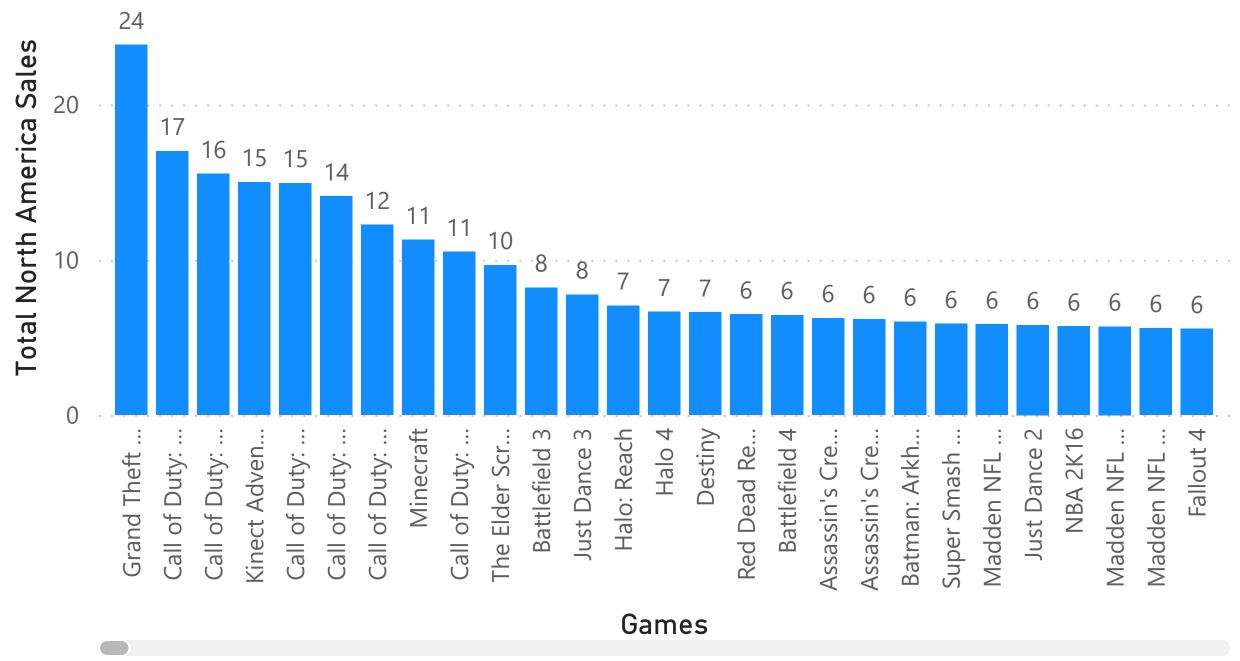
#### Top 4 Best Seller Games in Japan (1980 - 2020)

- Pokemon Red/ Pokemon Blue (Sales = 10.2)
- Pokemon Gold/ Pokemon Silver (Sales = 7.2)
- Super Mario Bros. (Sales = 7.0)
- New Super Mario Bros. (Sales = 6.5)

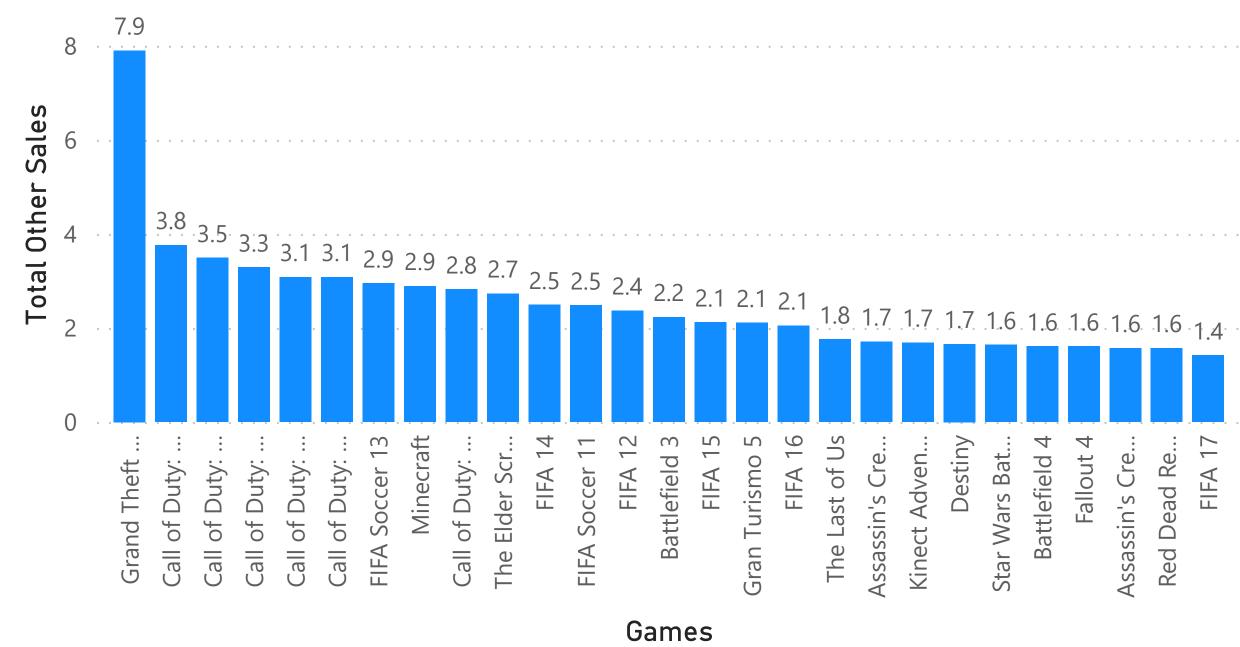
#### **Top 5 Best Seller Games in Japan (2010-2020)**

- Pokemon Black/ Pokemon White (Sales = 5.7)
- Monster Hunter Freedom 3 (Sales = 4.9)
- Animal Crossing: New Leaf (Sales = 4.4)
- Pokemon X/ Pokemon Y (Sales = 4.4)
- Monster Hunter 4 (Sales = 3.4)

#### Total North America Sales by Games



#### Total Other Sales by Games



#### Year of Release

rear_or_	Netease	
Select all	2013	2017
2010	2014	2020
2011	2015	
2012	2016	

#### **Top 5 Best Seller Games in North America (1980 - 2020)**

- Wii Sports (Sales = 41)
- Super Mario Bros. (Sales = 32)
- Duck Hunt (Sales = 27)
- Tetris (Sales = 26)
- Grand Theft Auto V (Sales = 24)

#### **Top 5 Best Seller Games in North America (2010 - 2020)**

- Grand Theft Auto V (Sales = 24)
- Call of Duty: Black Ops (Sales = 17)
- Call of Duty: Modern Warfare 3 (Sales = 16)
- Kinect Adventures! (Sales = 15)
- Call of Duty: Ghosts (Sales = 15)

#### **Top 5 Best Seller Games in Others (1980 - 2020)**

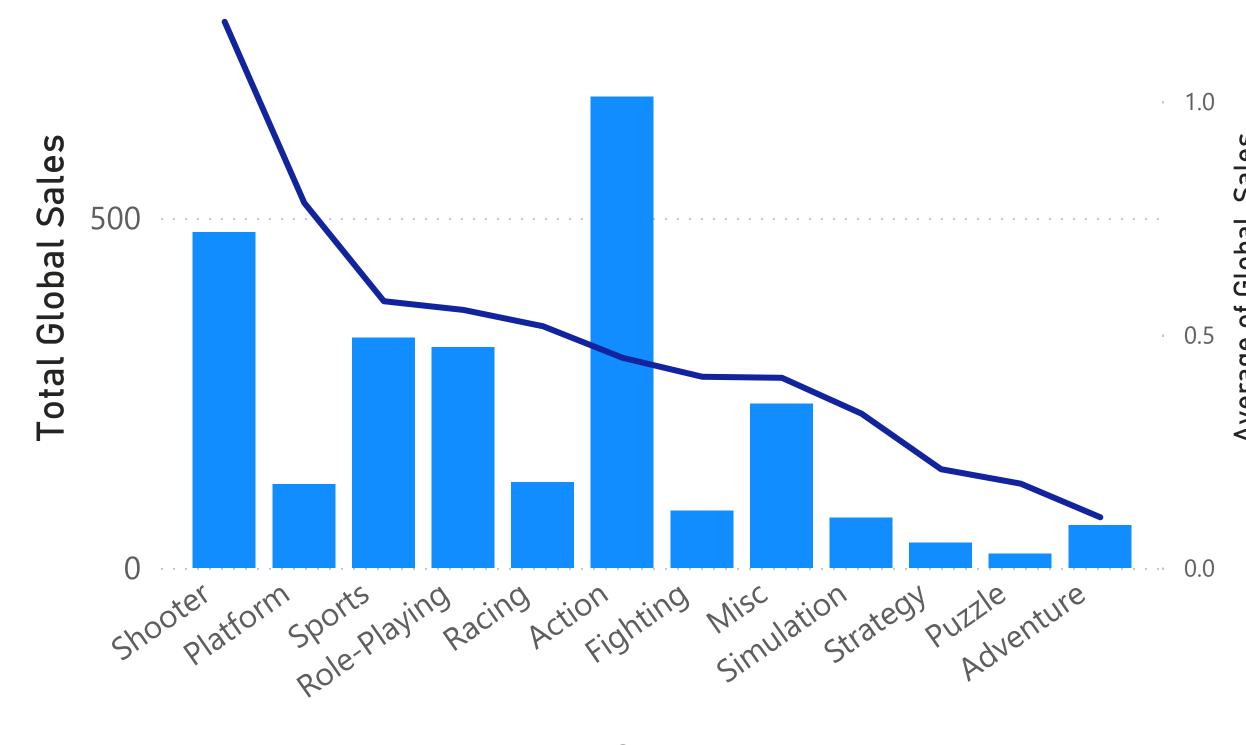
- Grand Theft Auto: San Andreas (Sales = 10.7)
- Wii Sports (Sales = 8.5)
- Grand Theft Auto V (Sales = 7.9)
- Gran Turismo 4 (Sales = 7.5)
- Call of Duty: Black Ops II (Sales = 3.8)

#### **Top 6 Best Seller Games in Others (2010 - 2020)**

- Grand Theft Auto V (Sales = 7.9)
- Call of Duty: Black Ops II (Sales = 3.8)
- Call of Duty: Black Ops 3 (Sales = 3.9)
- Call of Duty: Modern Warfare 3 (Sales = 3.5)
- Call of Duty: Black Ops (Sales = 3.3)
- Call of Duty: Ghosts

## Total global sales and average global sales based on genre of games from 2010 to 2020





Genre

#### Year\_of\_Release

Select all	2011	2013	2015	2017
2010	2012	2014	2016	2020

The chart showing the total global sales in million with the average global sales for each genre of games. In this project, we filtered the time period of the year of release to 10 years time which is from 2010 to 2020.

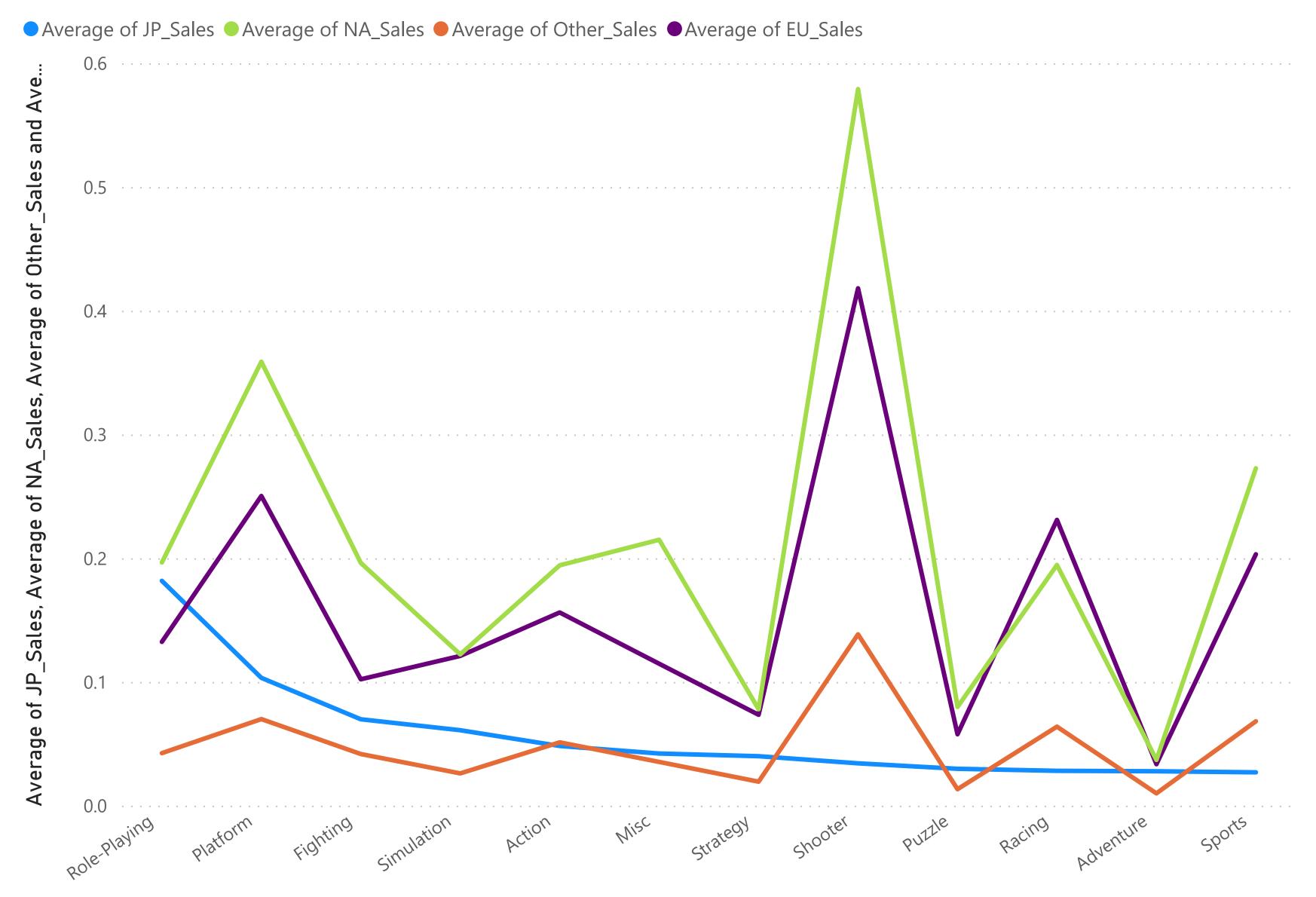
Based on the data show from 2010 to 2020, we able to see the action games has the highest total global sales, 673.50 millions. If ignoring the relationship between the global sales and the number of games published, we can see that the action games is the most popular among others games as it has the highest total global sales. Following by shooter games, sports games, role games, and so on. The games that has the lowest total global sales is puzzle games. It only has 20.58 millions of total global sales in 10 years time.

For the average global sales, the average global sales for puzzle games is 20.58 millions which is the lowest total global sales among others genre. However, the shooter games has the highest average global sales, 1.17. Based on the observation, we can see that although the shooter games did not has much higher global sales but it still can be the most profitable as each of the shooter games can sales around 1.17 millions which means that if published more shooter games, the total global sales can exceed the total global sales of action games.

We can use this chart to decide which type of games that the publisher, platform or developer can consider to published or develop more in order to be the high-selling publisher and earn more money.

**Suggestion:** Based on the information obtained from the chart, suggestion given to the publisher is they should consider publish more shooter games. It is because the average global sales is the highest compare to others. It means that if published 1496 shooter games in future, the publishers can has high sales than currently published same amount of action games which it's average global sales is only 0.45.

#### Average of JP\_Sales, Average of NA\_Sales, Average of Other\_Sales and Average of EU\_Sales by Genre



#### Year\_of\_Release

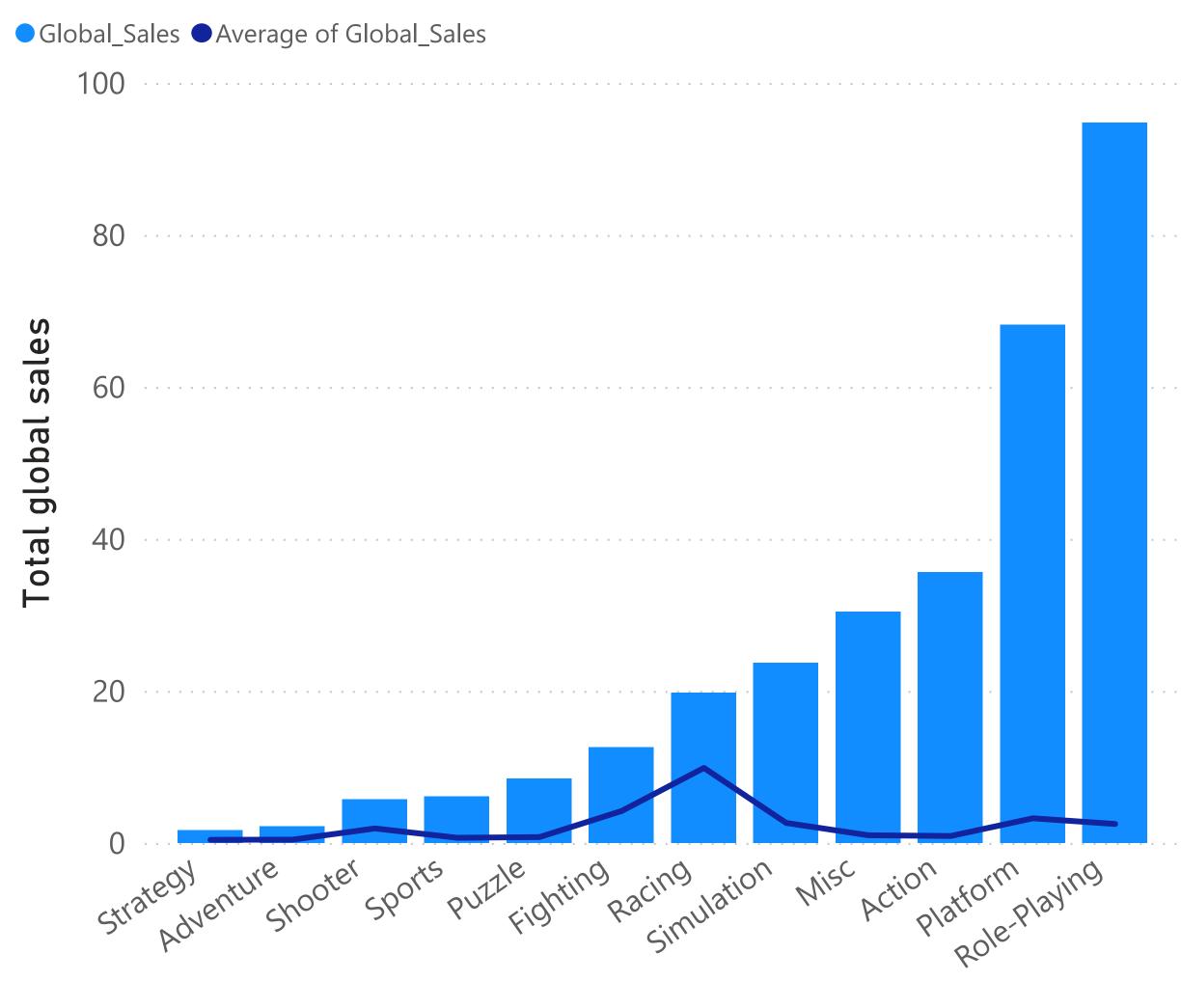
Select all	2011	2013	2015	2017
2010	2012	2014	2016	2020

In case the publisher wanted to focus on the sales from some specific country such as Japan, the chart may help them to determine which type of games in the selected country has more potential in increasing the sales.

The chart shows the average of sales in Europe, Japan, North America and other countries from 2010 to 2020.

The chart shows shooter games has the highest sales in Europe, North America and other countries except Japan. However, the role-playing games has the highest average sales in Japan. Therefore, without referring to the number of games published, we can see that in Japan, the role playing games is more popular than others games.

## Total global sales and average global sales based on genre of games



Genre

\* The chart is same as the previous chart, but this chart considering using a selected publisher to do analysis and data visualization

Nintendo: Which type of games should publish more in the coming years?

Filter: Publisher=Nintendo, Year= 2010-2020

Based on the chart, the role-playing games has the highest total global sales and following by the platform games, action games and so on. The games has the lowest total global sales is strategy games which only has 1.65 millions of global sales.

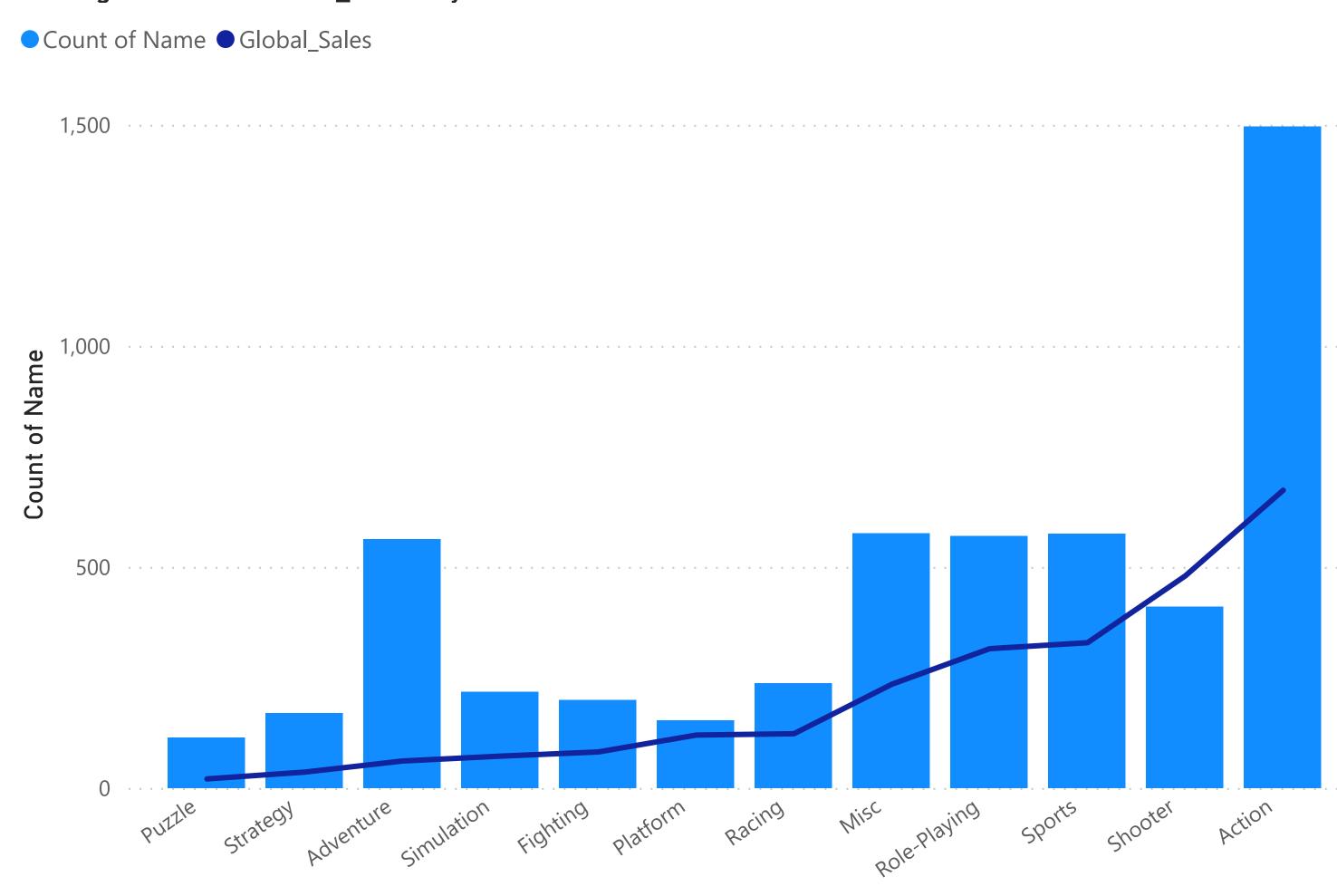
Based on the chart, the racing games has the highest average global sales which is 9.88 following with the fighting games, it has 4.21 of the average global sales. From the chart, the role-playing has the highest total global sales but average one role-playing sales only 2.49.

If based on the chart to for Nintendo to choose which type of games should consider to publish more in order to get higher sales is racing games. It is because a racing games average can earn 9.88 millions which is highest amount compare to others genre of games.

## Year\_of\_Release Select all 2011 2013 2015 2017 2010 2012 2014 2016 2020



#### Total games and Global\_Sales by Genre



Year_of_Release									
Select all	2010	2011	2012	2013	2014	2015	2016	2017	2020

Genre

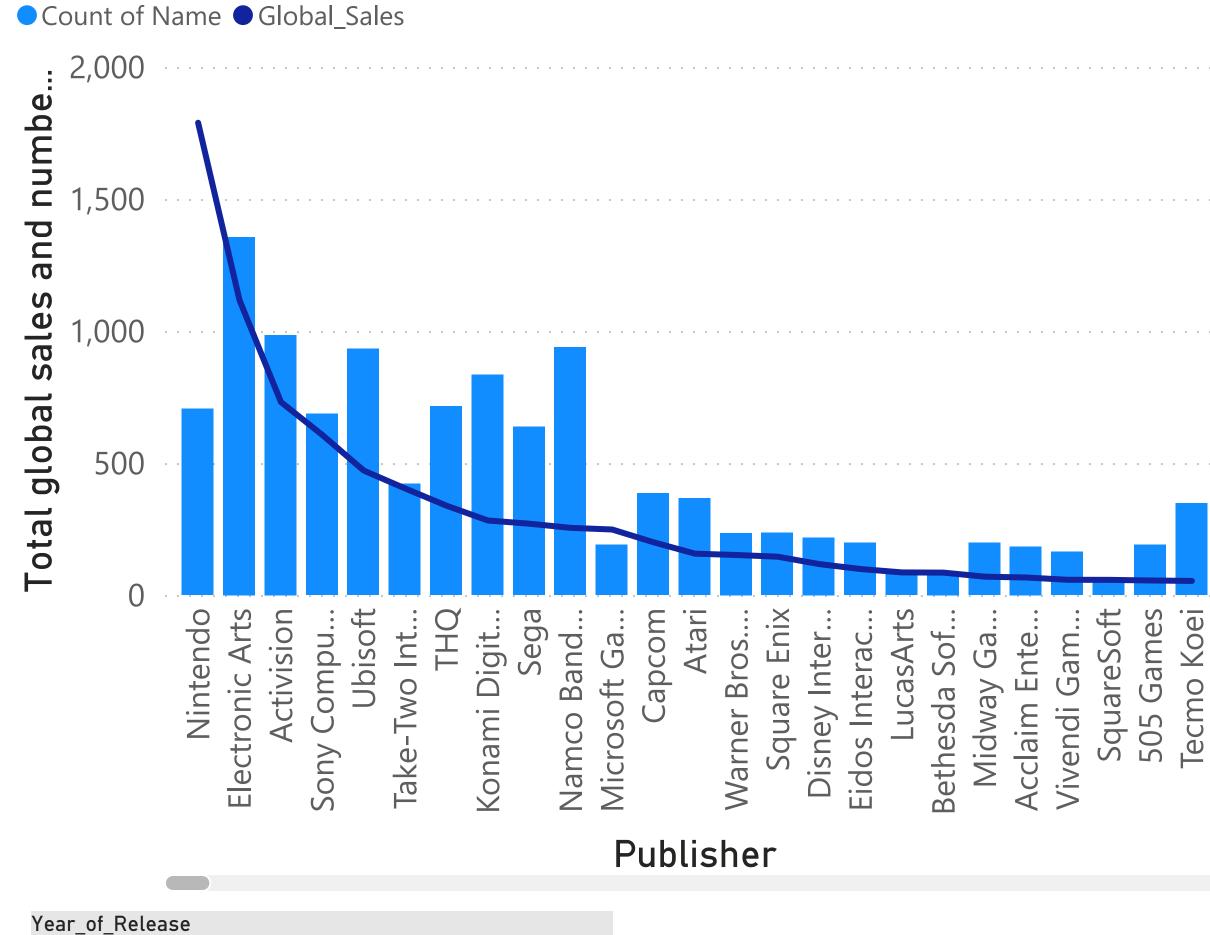
The action games has the highest total global sales from 1980 to 2020. The chart shows that action games is the most games published and the highest total global sales from 1980 to 2020. There are total 3370 action games being published in this 40 year. The puzzle games is the least games published. There is only 580 puzzle games published in the video games market. In addition, the strategy games has the lowest total global sales which is only has 174.50 million sales in this 40 years.

Besides that. based on the chart, we can see that the number of games are positively correlated with the total global sales for each genre of games.

#### Filter: 2010 - 2020

With the filter, the chart will show the total games and global sales based on genre from 2010 to 2020. Based on the chart, action games still the most games published (1496 games) and puzzle games also still the least games published(114 games). Moreover, the action games still having the highest total global sales which is 673.90 millions. However, the puzzle games has the lowest total global sales that computed in 2010 to 2020 (20.58 millions).

## Total games and total global sales from 1980 to 2020 by publisher



ar_of_Relea Select all	2011	2013	2015	2017
2010	2012	2014	2016	2020

From the line and stacked column chart, Electronic Arts has the highest number of games published from 1980 to 2020 which is 1356 games. We can see that the top 5 highest total global sales are Electronic Arts, Activision, Namco Bancha, Ubisoft and Konami Digital Entertainment. Furthermore, Nintendo is the one who has the highest total global sales which is 1788.81 unit sales in millions with published 706 games in the 40 years time. Following by Electronic Arts, the total global sales is 1116.96 millions.

The line and stacked column chart is also able to describe the relationship between the total global sales and the number of games published by each publisher from 1980 to 2020.

Based on the overall chart, we able to see that the total global sales and number of games published by each publisher are positively correlated with each other. It means that when if the publisher published more games, the global sales will also be high.

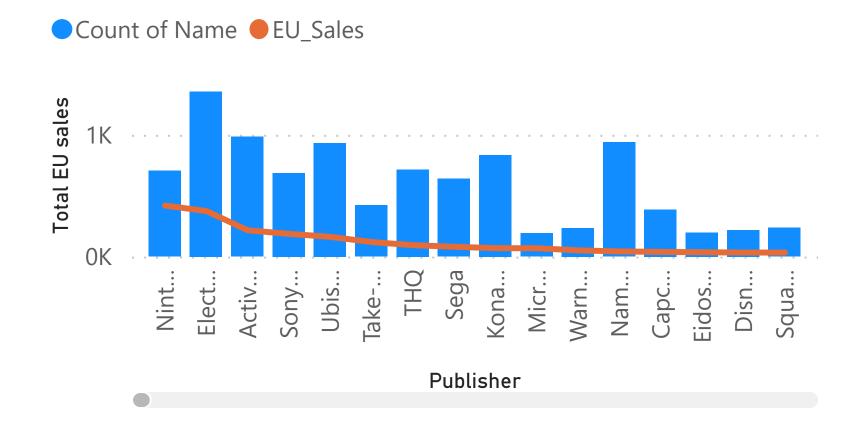
In this case, it is not so suitable to use the sum of sales from each publisher to obtain which publisher may be a best choice for developer to choose in order the game developed can be publish by the publisher that has the potential to help in earning money in the future. It is because higher sales is mostly depend on the number of games published by the publisher.

#### Filter: 2010-2020

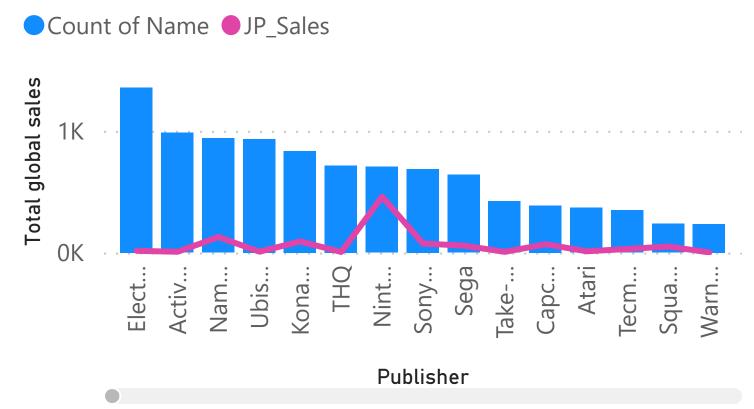
For a better data visualization, we may consider to select only data that are nearly 10 years ago which is from 2010 to 2020. It is because time changes, too long time data may unable to reflect the current situation. Therefore, we only consider 10 years for our visualization. In this situation, we applied the filter on the chart.

Based on the chart with record from year 2010 to 2020, the top 5 highest global sales publisher are now Electronic Arts, Nintendo, Activision, Ubisoft and Take-Two Interactive.

## Number of games published by publisher and total EU sales from 1980 to 2020



## Number of games published by publisher and total JP sales from 1980 to 2020



Number of games published by

1980 to 2020

publisher and total Other sales from

# America and other countries. Based on all 4 charts, Electronic Arts has the highest total sales for Europe, Japan, North America and other countries that compute from 1980 to 2020. We able too see that the top 5 publishers that having the highest total sales for all the 4 country are Electronic Arts, Activision, Namco Bandi Games, Ubisoft and Konami Digital Entertainment These chart are use to describe the relationship between

All 4 charts are showing the total games published by

each publisher and the sales from Europe, Japan, North

These chart are use to describe the relationship between the total sales from Europe, Japan, North America and other countries and the number of games published by each publisher from 1980 to 2020.

Based on the chart, Nintendo has the highest total sales from Europe, Japan and North America. For sales compute from other countries, Electronic Arts has the highest total sales.

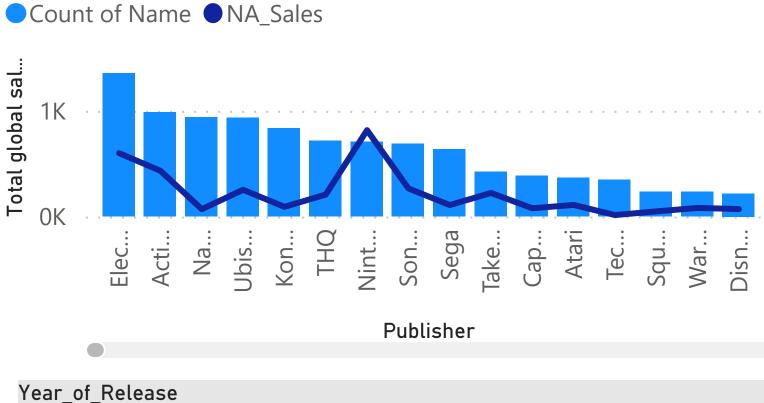
From the overall chart, we able to see that the total sales from every countries and number of games published by each publisher are positively correlated with each other. It means the more game the publisher published, the higher the sales.

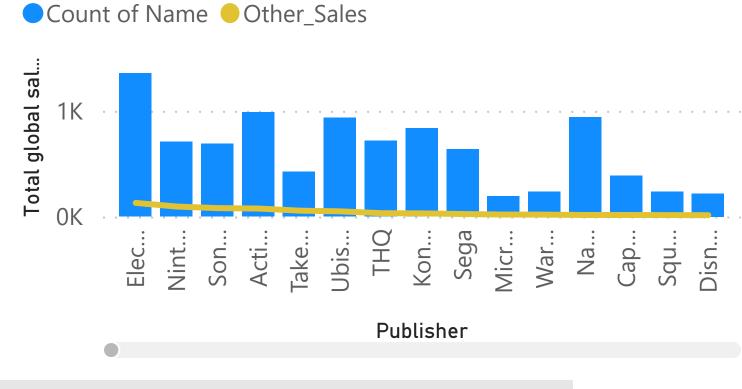
#### Filter: 2010-2020

Same as the previous chart, we will also apply filter on the 4 chart to see the sales and number of games published from 2010 to 2020.

Based on the chart from year 2010 to 2020, the top 5 publisher has highest sales in Europe, Japan, North

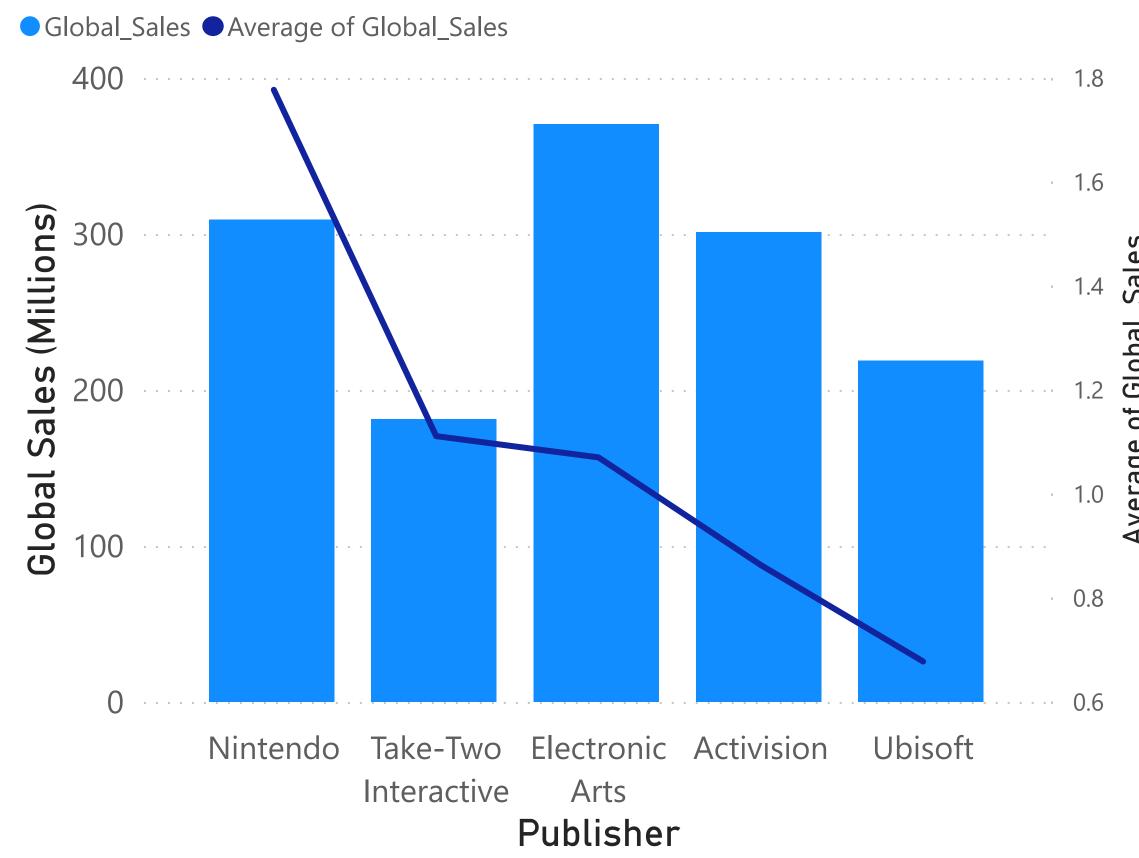
## Number of games published by publisher and total NA sales from 1980 to 2020





Select all 2010 2011 2012 2013 2014 2015 2016 2017 2020

#### Total Global Sales and Average Global Sales by publisher



#### Publisher

Select all	Electronic Arts	Take-Two Interactive
Activision	Nintendo	Ubisoft



#### This chart helps the developer to choose a publisher's sales potential.

This chart used to compare the average global sales between each publisher. The chart included bars which refer to the sum of global sales for each publisher and with a line referring to the average global sales earn from each publisher. Based on the overall chart without any filtering, the publisher named Palcorn has the highest average global sales which is 4.17 with only 1 games published in the 40 years time which is from 1980 to 2020. Besides that, 505 Games published the highest number of games in the 40 years time and the average global sales is only 0.29.

#### Filter: 2010-2020, top 5 publisher

In our report, we actually consider to do analysis on the the global sales and average global sales from 2010 to 2020. We selected the top 5 publisher with the highest global sales which are Electronic Arts, Nintendo, Activision, Ubisoft and Take-Two Interactive.

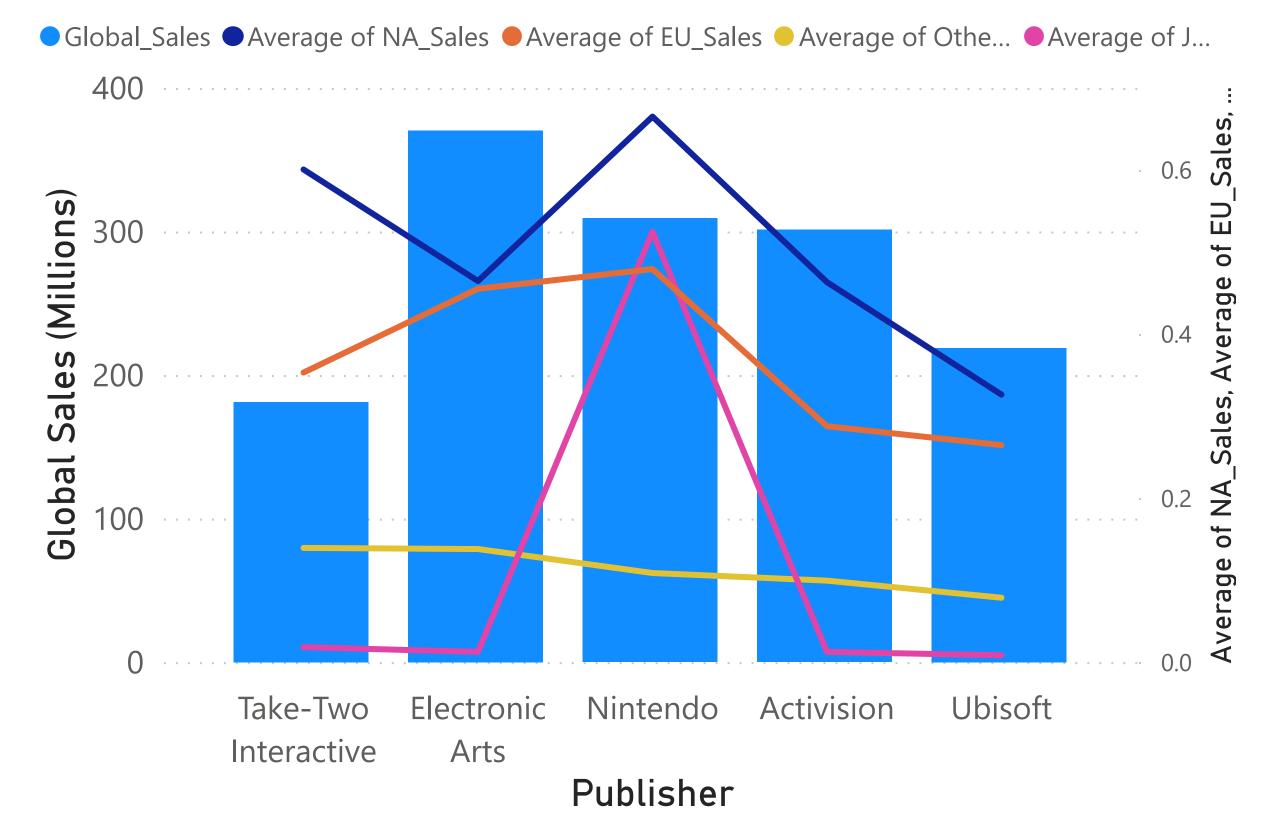
Average global sales are quite suitable to use as a measuring the publisher's sales potential because average global sales referred to the average sales of a games published by each publisher. It is more suitable than using sum of global sales.

With the filter, the chart shows that Electronic Arts is the one who published the highest number of games in 10 years time. For the average global sales, Nintendo has the highest average global sales which is 1.78 and it also published total 174 games from 2010 to 2020. The average global sales for Ubisoft is the lowest compare to other 5 publisher which is 0.68 millions. In this case, we may consider that if developer choose Nintendo as their game publisher, it able to let the developer to earn more as the sales of games in Nintendo will increase and higher than other publisher,

As we can see that although the Ubisoft getting the total global sales which is higher than the global sales from Take-Two Interactive, but the average global sales are lesser than the Take-Two Interactive. This situation maybe because there exist the high production cost in the games published. Therefore, the high production cost effected their sales.

**Suggestion:** In case to get more sales in the future, the developer should consider choosing Nintendo to publish the game as the average global sales for Nintendo is the highest.

#### Number of games and average sales of each publisher



<sup>2</sup> u	blisher		
	Select all	Electronic Arts	Take-Two Interactive
	Activision	Nintendo	Ubisoft

Year_of_Release								
Select all	2012	2015						
2010	2013	2016	>					
2011	2014	2020						

### This chart helps the developer to choose a publisher's sales potential.

This chart used to compare the average global sales between each publisher. The chart included bars which refer to the sum of global sales for each publisher and with 4 line referring to the average sales in Europe, Japan, North America and other country. The chart is quite similar to the previous chare. The different is we just we separate out the global sales into 4 countries:

#### Global sales = Europe Sales + Japan Sales + North America Sales + Other Countries Sales

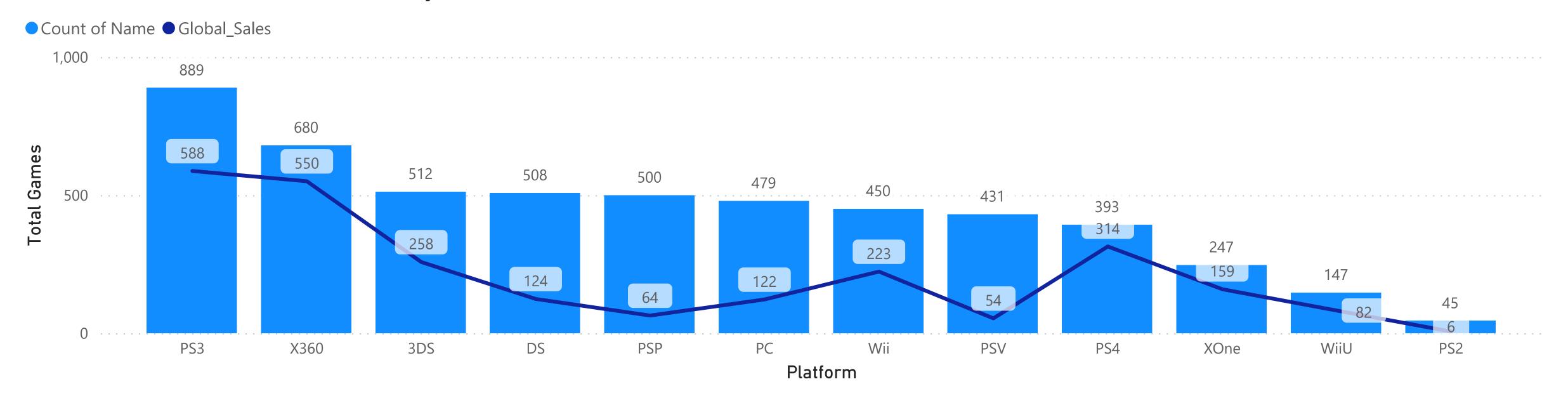
In this chart, we considered to filter the year of release and also the publisher. The time period of the year of release is from 2010 to 2020. Moreover, we selected the top 5 publisher with the highest global sales which are Electronic Arts, Nintendo, Activision, Ubisoft and Take-Two Interactive.

The chart shows that Electronic Arts is the one who published the highest number of games in 10 years time, then following by Nintendo, Activision, Ubisoft and Take-Two Interactive.

Nintendo has the highest average North America sales, Japan Sales and also Europe sales, but for the highest average sales in other countries, Take-Two Interactive has the highest average sales

Therefore. we can see that if developer would wanted to select to publish their games on Japan, Europe or North America's Market, they should consider using Nintendo as it sales of a game in Japan, Europe and North America is consider high, otherwise, choose to Take-Two Interactive.

#### Total Released of Video Games by Platform



Y	ear_of_	Releas	se			
	Select all	2011	2013	2015	2017	
	2010	2012	2014	2016	2020	

P	latform				
	Select all	PS2	PSV	XOne	
	3DS	PS3	Wii		
	DS	PS4	WiiU		
	PC	PSP	X360		

The bar chart shows the total released video games by platform.

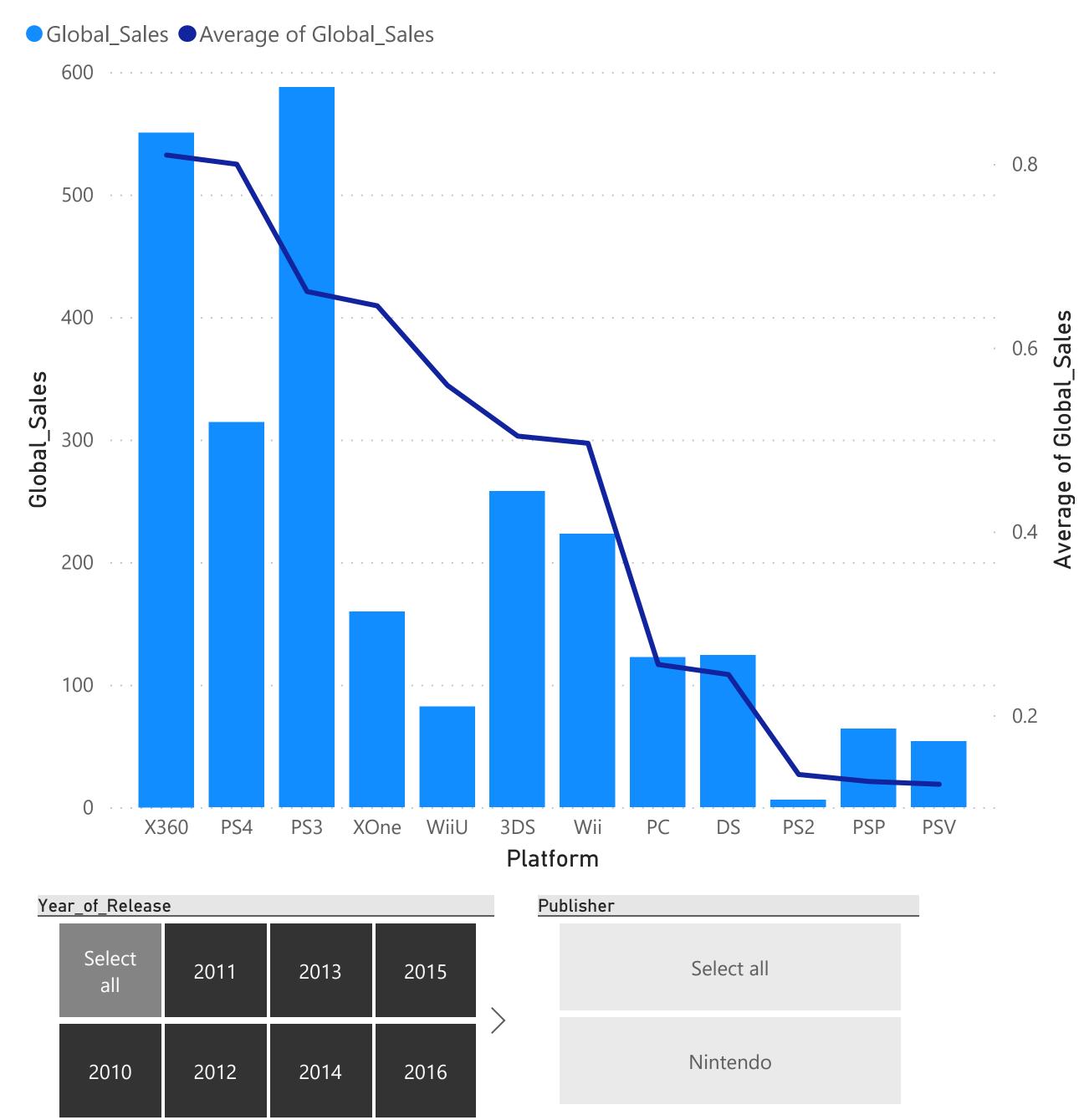
Computing all the data from 1980 to 2020, the platform that has highest total number of video games published is PS2. PS2 published total 2161 games in the 40 year times.

#### Filter: 2010-2020

Based on the chart, we can see that PS3 published the most games in 10 years time. PS3 published total 889 games in 2010 to 2020. PS2 published the least games which only published 45 games in 10 years time.

Based on our observation, we can see that PS3 is more popular than the PS2, so that more publisher would choose to publish games on PS3.

#### Global\_Sales and Average of Global\_Sales by Platform



#### Filter: 2010-2020

The chart shows that from 2010 to 2020, PS3 has the highest total global sales. It has 587.69 millions of the total global sales. Then, following by X360, PS4 and so on. The platform that having the lowest total global sales is PS2 which only has 6.10 millions. If without considering the number of games published in each platform, this situation may tell us that most of the people choose to use PS3 to play games rather than use PS2. It also because of PS3 is more new version compare to PS2.

Besides that, the chart also shows the platform that having the highest average global sales is X360 with 0.81 millions and the platform with the lowest average global sales is PSV, 0.12 millions.

In this case, it shows that if more games published at X360, the sales may increase and exceed the sales of PS3 as the average global sales for PS3 is only 0.66 millions.

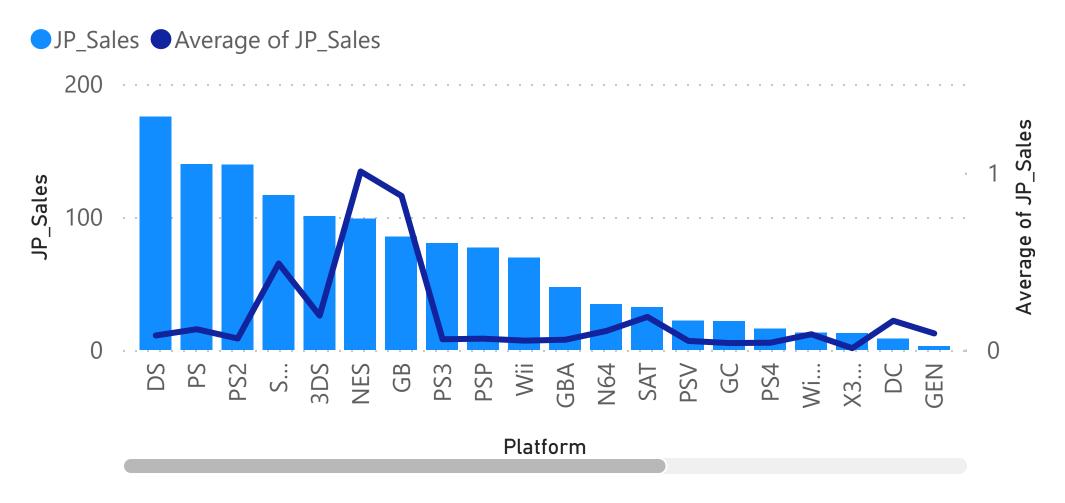
We can use the chart to suggest that in the future, publisher can consider to focus in publishing games more on GB as the average global sales is the highest.

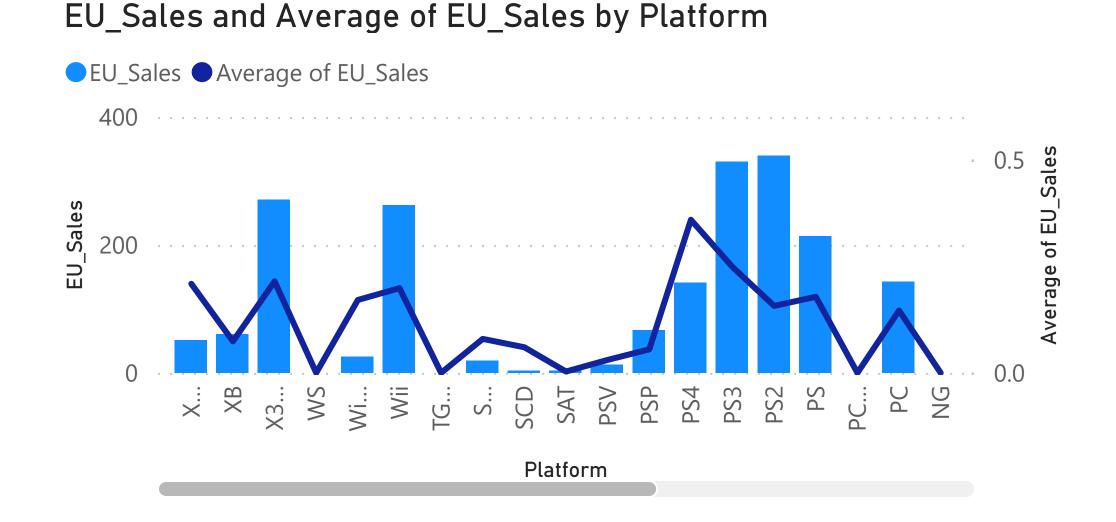
#### Filter: Nintendo, 2010-2020

The chart shows that from 2010 to 2020, Nintendo only published the games on 4 platforms which are 3Ds, WiiU, Wii and D5. The highest global sales is 166.76 millions which is when Nintendo published the games on 3DS during the 10 years time. The second highest is publish games on WiiU which has 58.09 millions, following by Wii and DS. DS has the lowest sales compare to another 3 platform which only has 37.49 millions. Refer to the average global sales, 3DS has the highest average global sales which is 1.99 millions and following by DS, Wii and lastly is WiiU. WiiU has the lowest average global sales which is 1.38 millions.

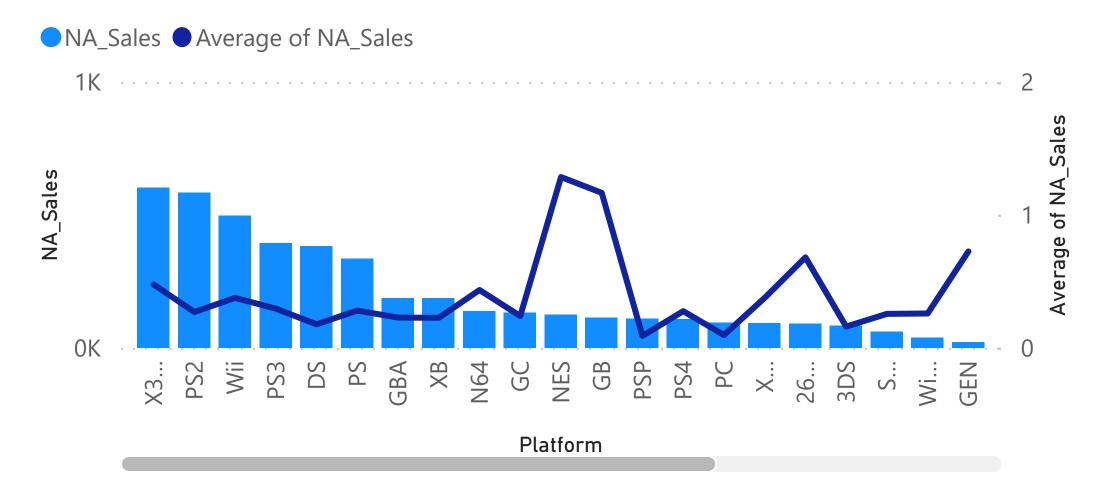
We can use the chart to suggest that in the future, Nintendo can consider to focus in publishing games more on 3DS platform as the average global sales is the

#### JP\_Sales and Average of JP\_Sales by Platform

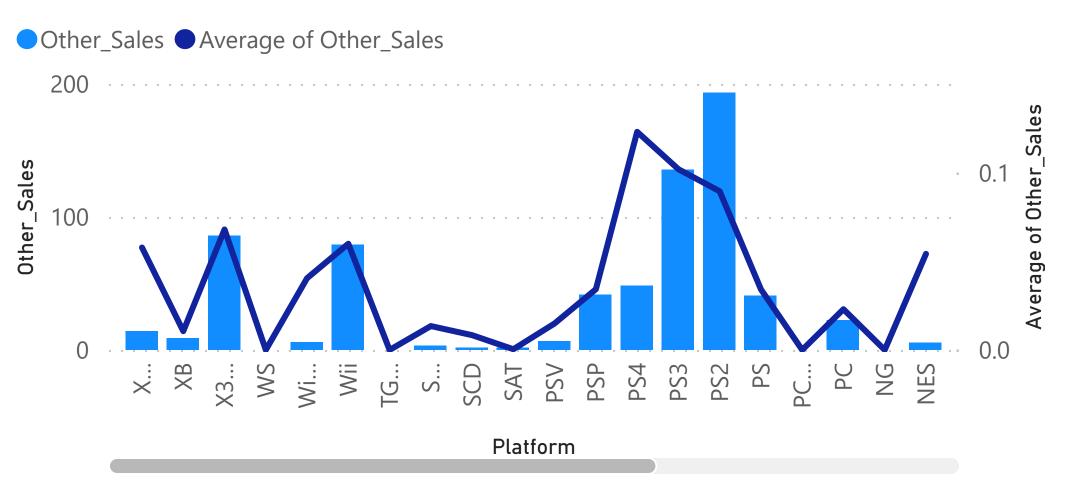




#### NA\_Sales and Average of NA\_Sales by Platform



#### Other\_Sales and Average of Other\_Sales by Platform



These are the chart showing the sales in Japan, Europe, North America and others country and average sales.

Name	▼	Count of Platform
Need for Speed: Most Wanted	12	10
Total	12	10

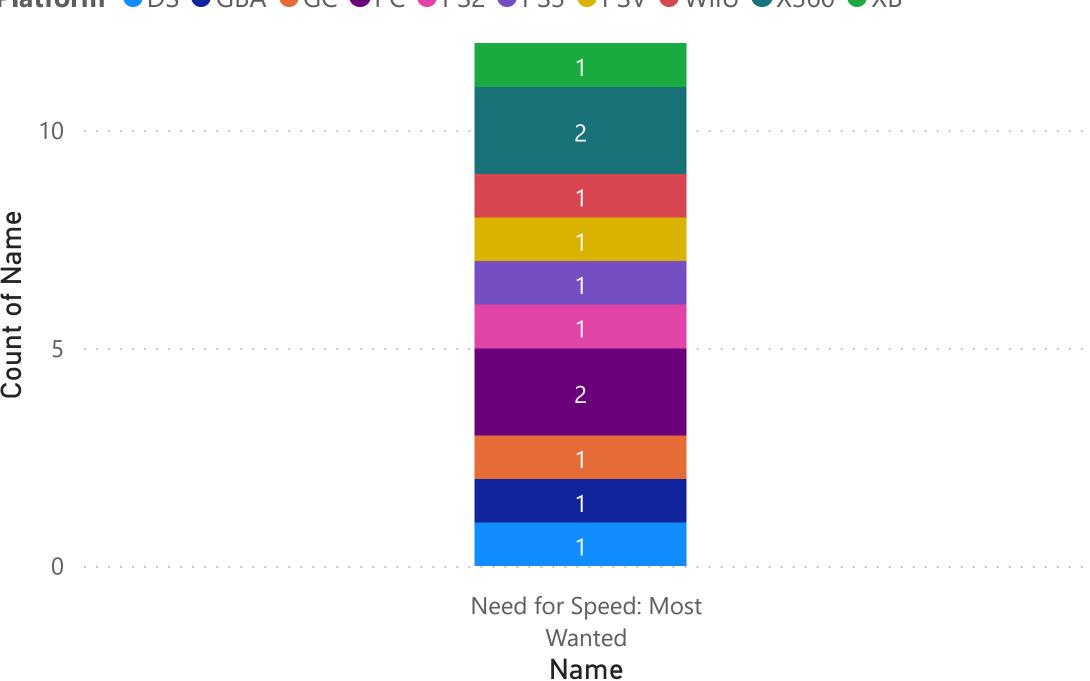
#### Name, Year\_of\_Release, Platform

Select all

✓ Need for Speed: Most Wanted



Total games and platform



#### Is there a game that published more than one times and if yes, where it published at and published by which publisher

#### Time period = 40 Years (No filter)

There exist some games that repeatedly published at different platform or different year. Using the table or chart, we can know that which game has repeatedly published at different platform or different year and how many times it published easily. With this information, we able to choose the game that repeated published to see how the sales of the game change when it published in different platform. (Show in next sheet)

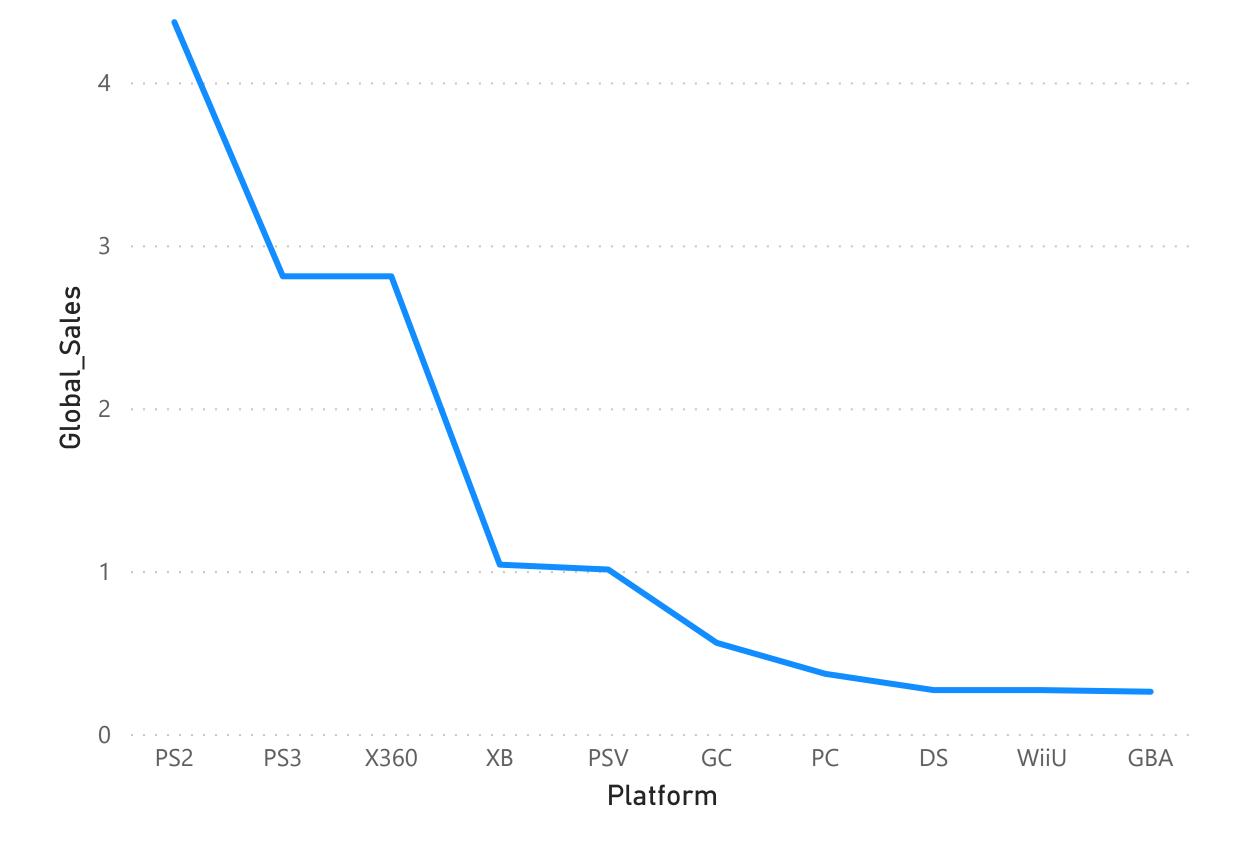
#### (Filter: Need for Speed: Most Wanted)

The table shows that this game has been published 12 times and released in 10 different platform. Which platform released this games shown in the chart. From the chart, we can see that this games has published on the XB platform and GC platform for 2 times.

#### (Filter: Need for Speed: Most Wanted, 2012)

The table shows that this games has been published 4 times and released in 4 different platform in 2012.

#### Global\_Sales by Platform



#### Name, Year\_of\_Release, Platform

- Select all
- ✓ Need for Speed: Most Wanted
  - ✓ ✓ 2012
  - ✓ ✓ 2013

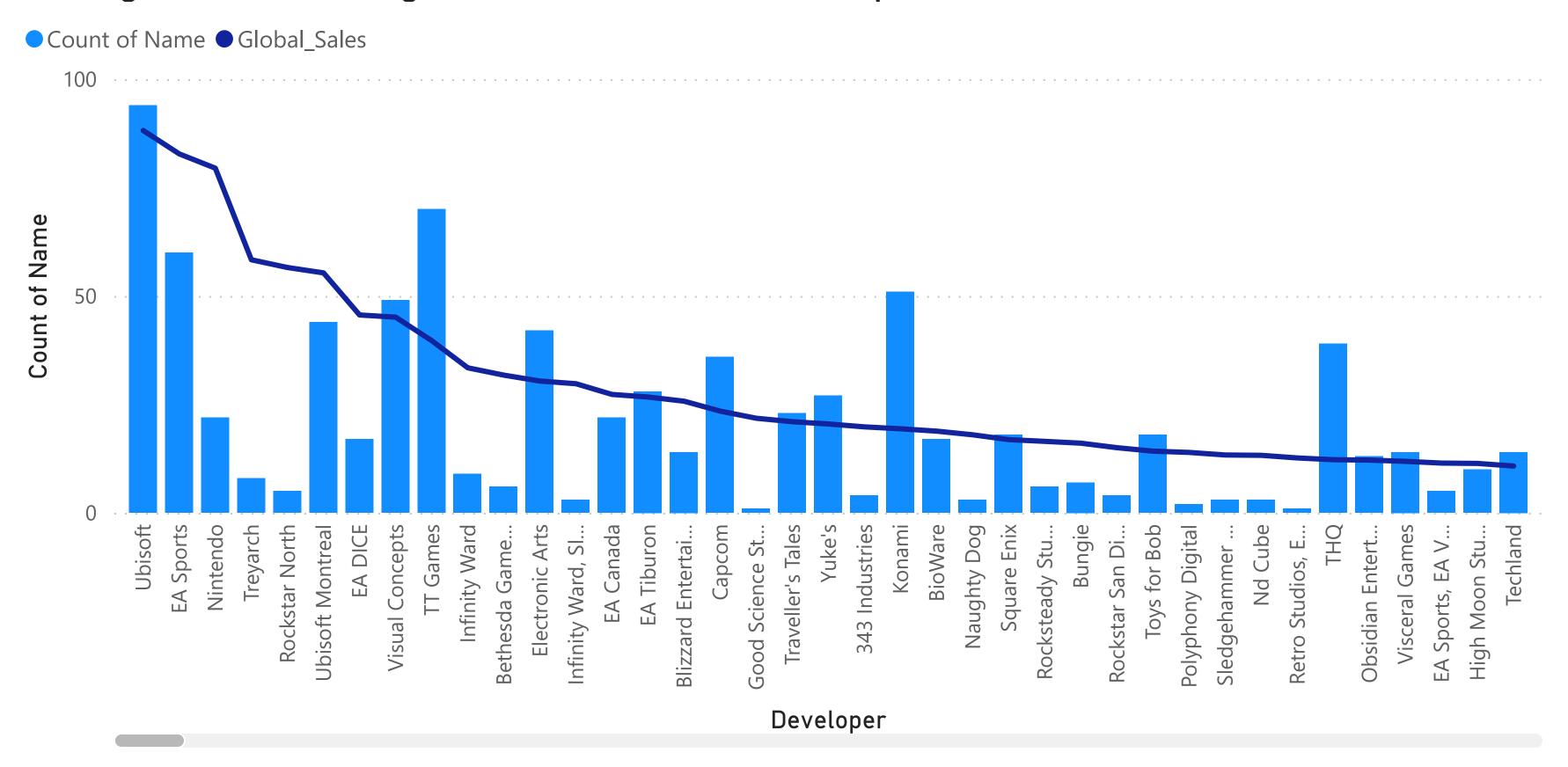
The chart shows the global sales for the game named Need for Speed: Most Wanted in each platform.

From the previous page, we know that the game, Need for Speed: Most Wanted has published on 10 different platforms. Therefore, this chart will show the global sales by the 10 platforms.

The chart shows that the platform that has the highest global sales is PS2. This platform has 4.37 millions of global sales when the game published on PS2. The platform having the lowest global sales is GBA with 0.26 millions of global sales.

This chart is useful for publisher who considering to publish new game on the platform. By using the chart, we can know that if a games with the similar characteristics or genre can generate the highest global sales at the most suitable platform.

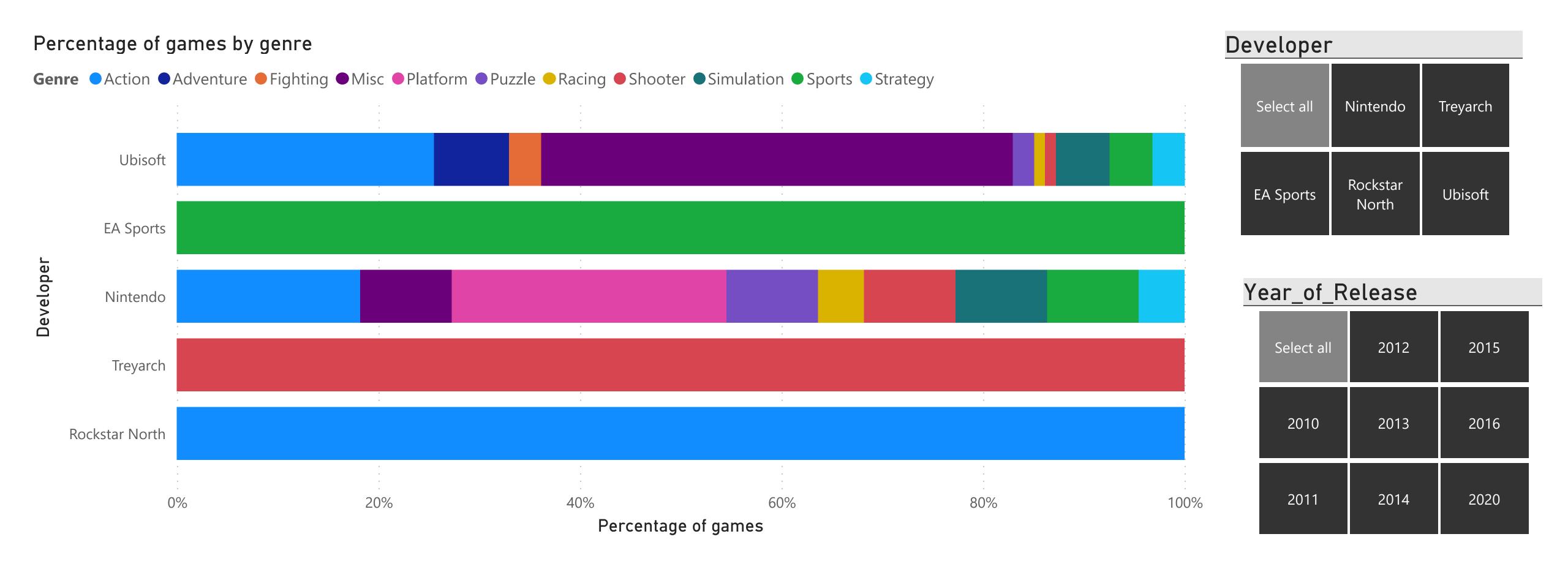
#### Total games and total global sales for each developer



The chart shows that the total games developed and the total global sales from 2010 to 2020. The chart shows that Ubisoft has the highest total global sales where the amount is 88.16 millions. The top 5 highest total global sales are Ubosoft, EA Sports, Nintendo, Treyarch and Rockstar North.

#### Year\_of\_Release

Select all	2014
2010	2015
2011	2016
2012	2017
2013	2020



The chart shows the percentage of the number of games developed and the genre of games.

The charts shows that the Rockstar North only developed action games during the 10 years time. From this observation, the Rockstar North is a developer who only develop the action games. The EA Sport also only develop startegy games. The Treyarch is the developer who only develop shooter games in this 10 years time. For Ubisoft, they got develop many type of games but mainly develop the misc games as the chart shows that the percentage of mics games is high.

Critic_Count	Average of Critic_Count	Min of Critic_Count	Max of Critic_Count	Standard deviation of Critic_Count	Variance of Critic_Count	Median of Critic_Count^
< 214498	26.36	3	113	18.98	360.21	>2,~

Critic_Score	Average of Critic_Score	Min of Critic_Score	Max of Critic_Score	Standard deviation of Critic_Score	Variance of Critic_Score	Median of Critic_Score
561190	68.97	13	98	13.94	194.25	71

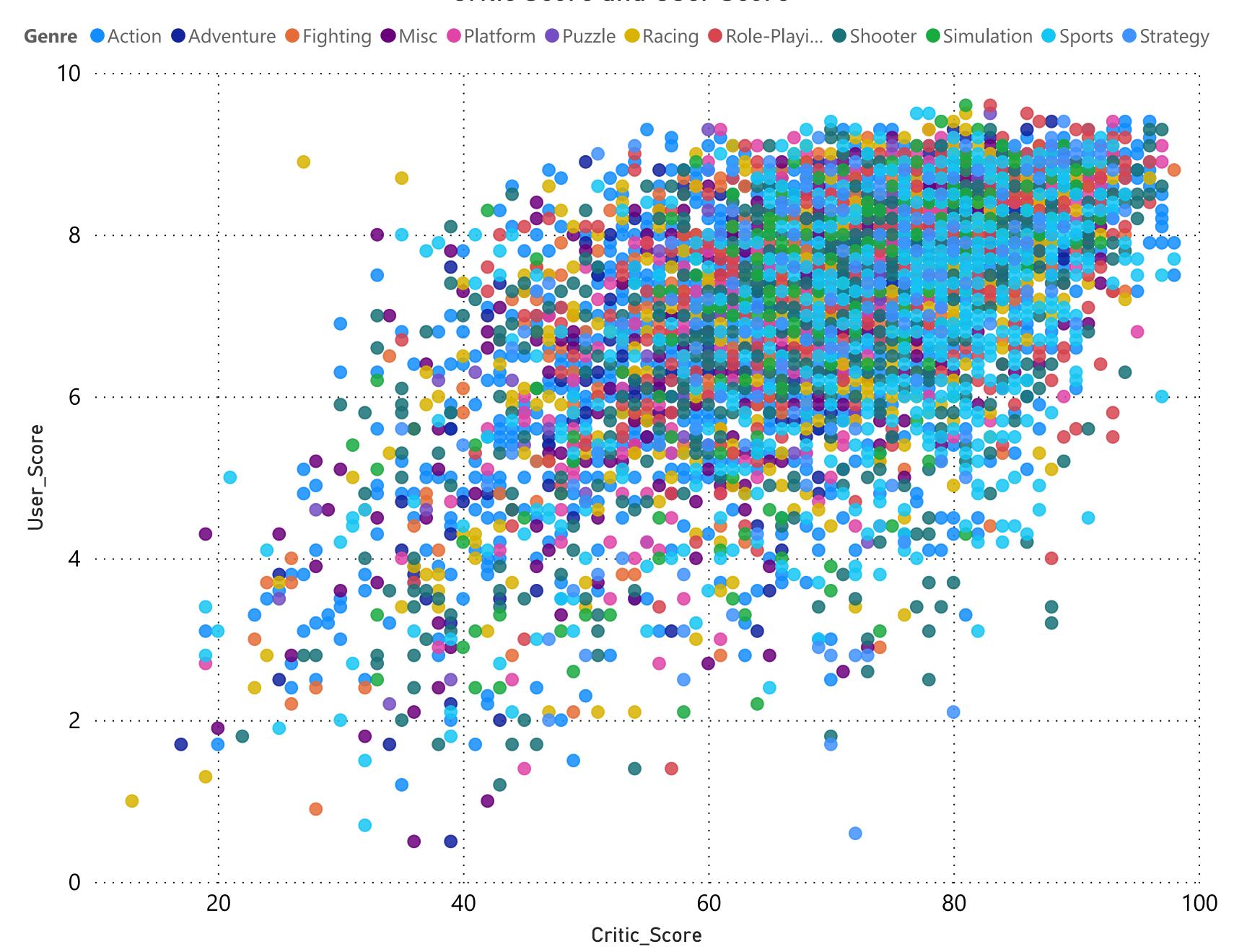
User_Count   Average	e of User_Count	Min of User_Count	Max of User_Count	Standard deviation of User_Count	Variance of User_Count	Median of User_Count
1231325	162.23	4	10665	561.25	314,996.34	24

User_Score	Average of User_Score	Min of User_Score	Max of User_Score	Standard deviation of User_Score	Variance of User_Score	Median of User_Score
54,079.10	7.13	0.00	9.70	1.50	2.25	7.50

Based on the results shown above, there are 1016827 more users subscribed to metacritics who have contributed to the scores compared to the critiques. The user scores are rated on a scale of 10 whereas the critic scores are given on a scale of 100. This explains the big difference in average of both scores.

The highest rated games are rated at a maximum score of 98% by critiques whereas the maximum of user scores are at 97%

#### Critic Score and User Score



68.97 7.13
Average of Critic\_Score Average of User\_Score

The chart shows a positive correlation between user score and Critic Score.

This is said because the points are scattered in an uphill pattern from the left to right.

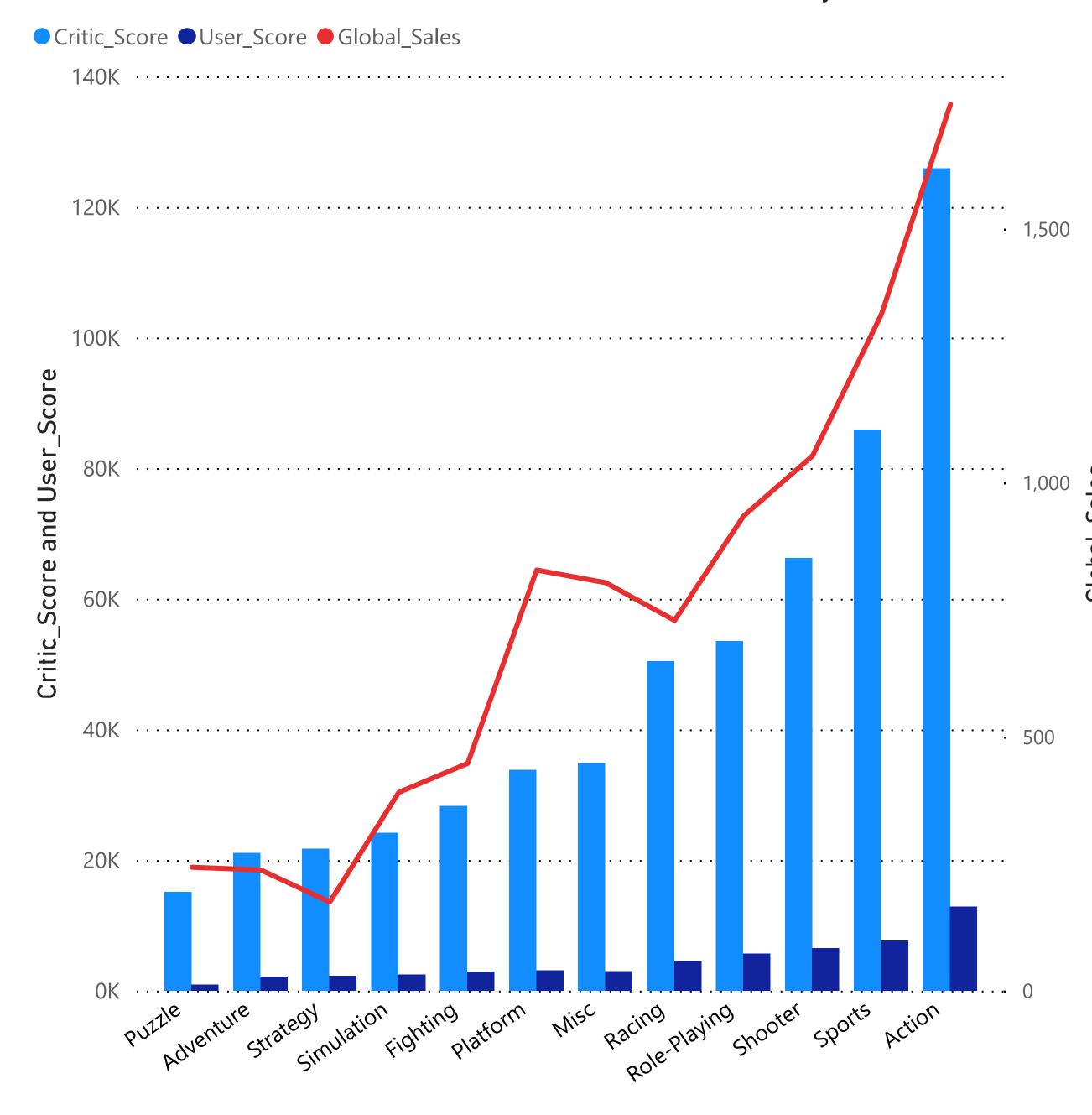
When user score increases, the critic score shows an upwards increase as well. With that, we can conclude that user score and critic score has a positive relationship.

Although critic score and user scores are measured on different scales, both average scores take up the upper quartile in the range.

This shows that the scores given by users and critiques are positively correlated. For instance, both the critique and user agree that the game is good hence the similarity in scores.

With that, we can conclude that both users and critiques will give a high score when the game is a good game, and vice versa.

#### Critic Score, User Score and Global Sales by Genre



Genre

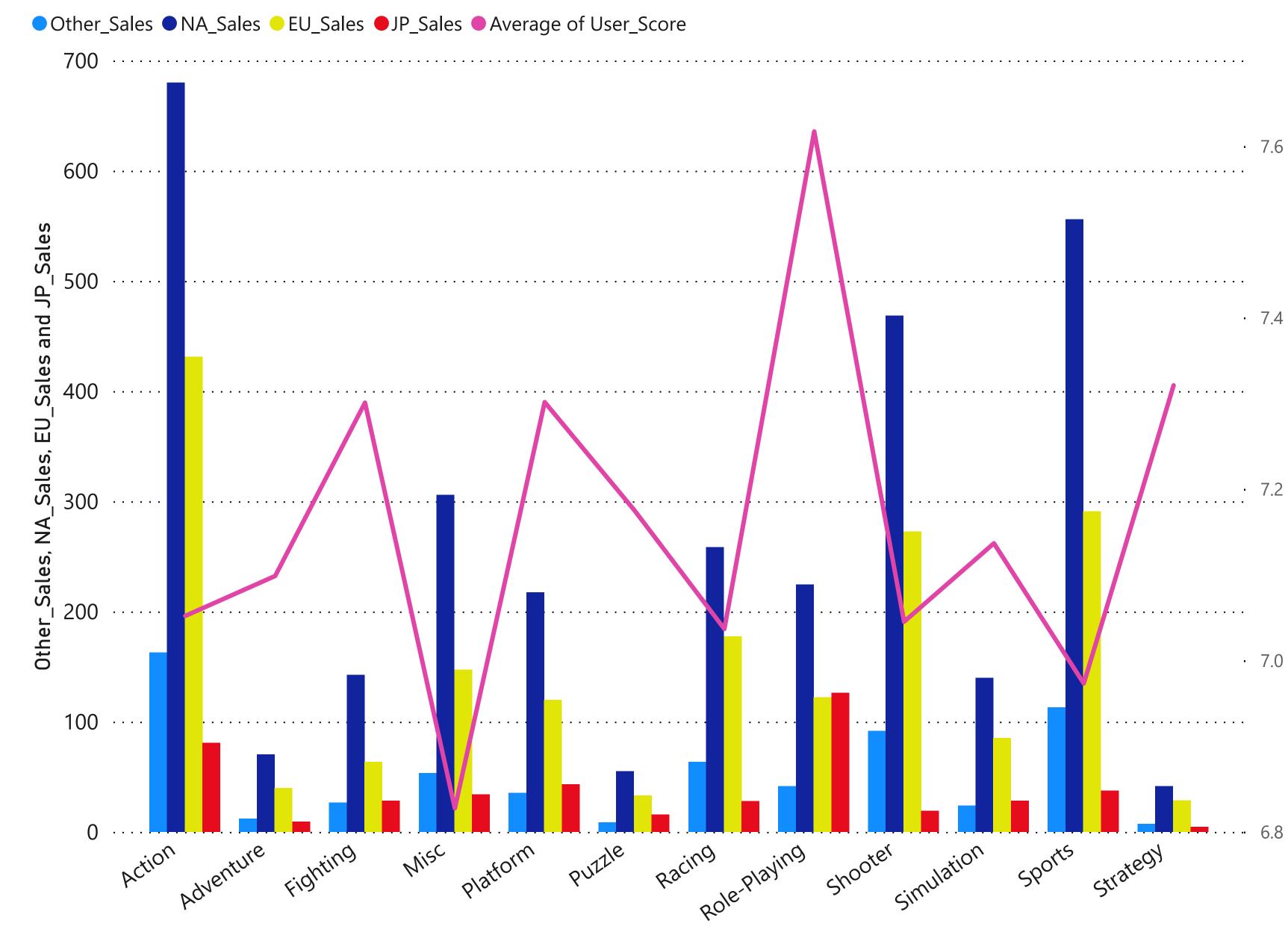
The chart shows the accumulated critic score, accumulated user score and global sales by genre.

As we can see, the chart shows that there is positive correlation between the critic score, user score and global sales. It means that the higher the critic score and user score, the higher the global sales.

Action games shows highest global sales and total scores given from both critiques and users.

Action games had the highest total Critic\_Score at 125929, and was 733.80% higher than Puzzle, which had the lowest total Critic\_Score at 15103.

#### Sales and Average User Score by Genre



Highest Average User Sore

7.62

Average Global sales of Role Playing games

0.66

According to the chart, North America has the highest sale of 680.06m in action games. Overall, Action games contributed the most sales in all genres

However, the high yield in sales do not mean that the game genre is the most popular.

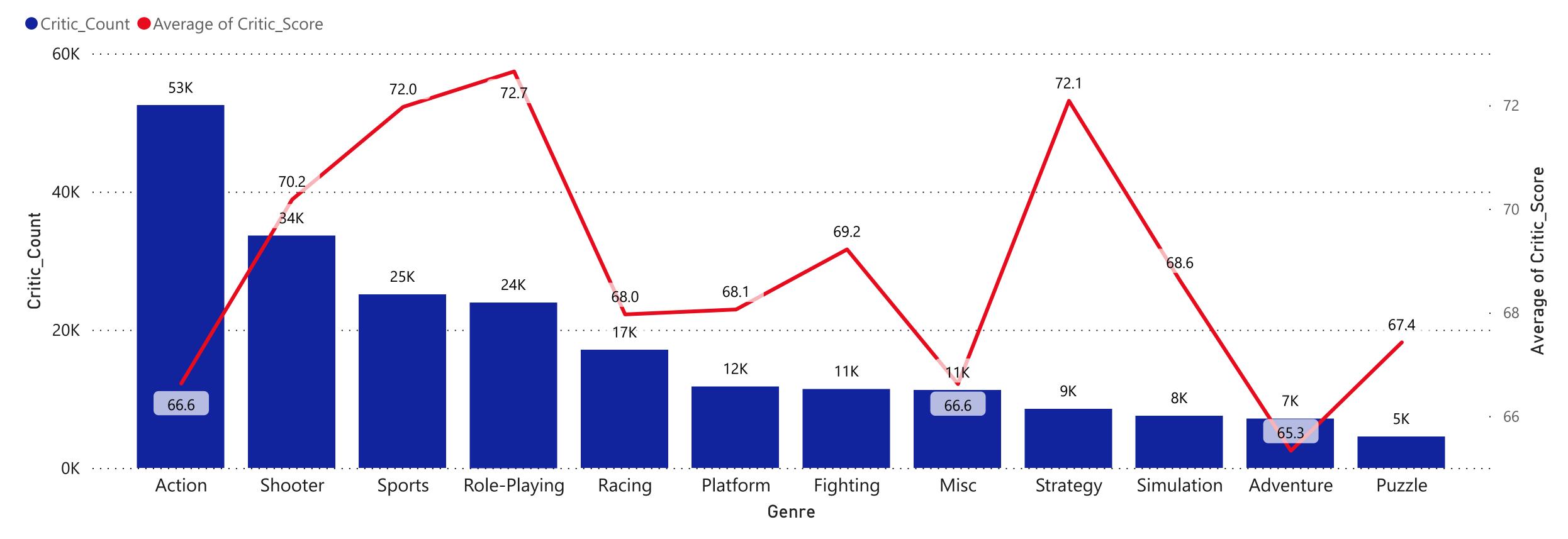
This is said because with the support of the previous charts, it is said that the number of games published within a genre determines the sales not to mention the number of platforms in which the games have been published. Hence, the high yield in sales could mean that more games of the genre has been published compared to other genres.

The peaks in sales also do not represent a good game as the average userscore and sales do not show any correlations.

With that said, according to the chart, Role playing meets the highest average user score of 7.62 with an average global sale of 0.66.

This means that most users have given role playing games higher score compared to other game genres. With that, we conclude that users prefer role-playing games.

#### Critic Count and Average of Critic Score by Genre



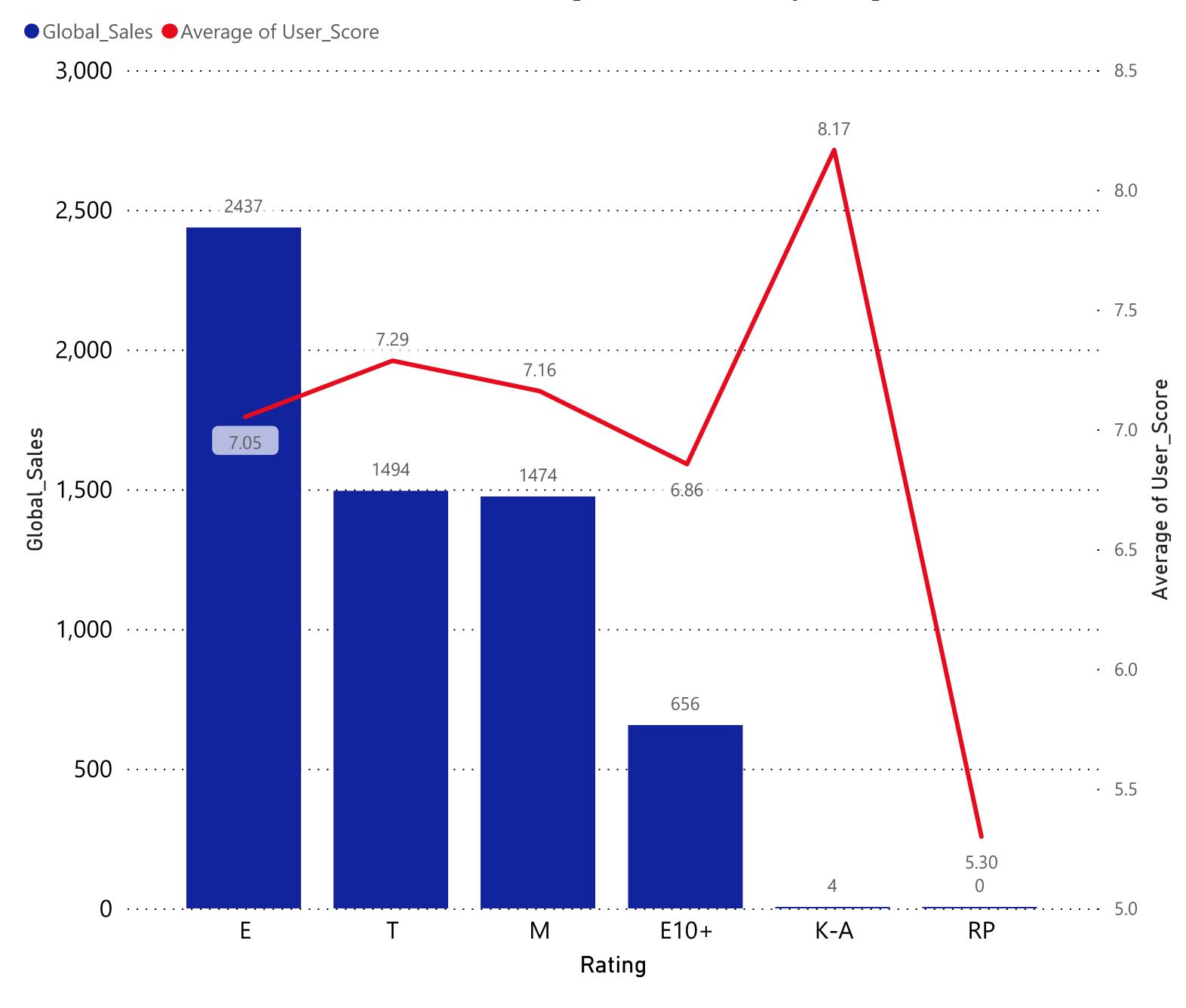
The chart shows that the average critic score in Role-Playing games and strategy games are ranked the highest at 72.7 and 72.1 separately.

The critic count represents number of critiques who have given the scores.

Critic count and the average critic score diverged the most for Action games. This explains that the critic score for Action game is more reliable as more critiques gave a score of an average of 66.6 for Action games. Whereas Puzzle games shows least reliability as there is a lower number of critic counts that gave an average critic score of 67.4

From the chart, we can conclude that critics gave the highest score of 72.7 for Role-playing games among all the game genres which means role-playing games are the most recommended game by the critiques among all the other genres.

#### Global Sales and Average of User Scores by Rating





The chart shows the global sales and average user scores by rating. Ratings such as AO (Adults only) and EC (Early childhood) games that have not been given a user score are removed to improve the data visualisation.

From the chart we can conclude that games rated E (everyone) achieves the highest yield in sales and accounted for 40.18% of global sales. However, users who rated only gave an average of 7.05 for games rated E with the highest sales of 2437m, which is not the highest score. This shows that games rated E are not the most popular games among users.

Moreover, games rated K-A (Kids - Adult) showed the highest average user score of 8.17. This should mean that most users find that games rated K-A are better compared to other games such as games rated RP (Rating- Pending) with the average user score of 5.30.

However, the rating of the games might have signs of overlapping as games rated E can also be rated K-A. Hence, rating might not be a good indication to be used when trying to improve sales. This chart gives a good picture of the most popular target audiences in different rated games.