What Qualities Define Commercial and Critically Successful Videogames?

Ethan Salcedo

1 Introduction

Videogames have been a rapidly growing industry since their mainstream debut in the 1980s with some analysts recently stating that it could be a “$300 billion-dollar industry by 2025”[[1]](#footnote-1). Videogames are everywhere and they can be created out of any idea with videogames ranging from the Call of Duty series, a realistic first person shooter set during both real and fictional world conflicts, to ‘I am Bread’, a physics based puzzle game that sees you play as a piece of bread attempting to reach a toaster without getting too dirty. With seemingly limitless possibilities there understandably exists a large amount of risk in developing any sort of videogame as how they will be received by audiences can be tricky to determine beforehand. A company that can determine the current trends in the market and respond quickly will always have the edge on their competition so determining what characteristics make for a popular game is beneficial to any developer looking to create the next big hit. Videogames have been around since 1980 but releases that saw consistent sales and Metacritic’s critic scoring system did not happen until 1999 so we will only be looking at videogames released from that year onwards.

2 Data

The data for this analysis was originally compiled together by user Gregory Smith and made publicly available on Kaggle. User Rush Kirubi found this set and was inspired by it, choosing to expand upon the data by adding additional variables and republished this expanded data set to his Kaggle. Building off of Smith’s initial web scrape of VGChartz.com where he recorded the data of videogames that sold more than 100,000 copies, Kirubi expanded upon the initial data set by conducting a web scrape of the website Metacritic, a popular media review site that has an extensive section for videogames. Due to the differences in videogames listed on each site the limitations of this data show itself in how there are many missing observations in the expanded data set. Of the 16,719 entries Kirubi states that there are about 6,900 entries that have an observation for every variable. We will only be using observations that have Metacritic and user scores recorded as the research we are conducting is based around these variables.

2.1 Variables

I have picked three variables to do my analysis on in hopes of drawing connections to a videogames financial and critical success. These variables are genre, global sales, and Metacritic score.

2.1.1 Genres Define Videogames

A screenshot of a cell phone

Description automatically generatedVideogames are broken into genres that aim to quickly describe the type of gameplay features you can expect to experience while playing it. Genres such as ‘Shooter’ are used to describe videogames with weapon-based gameplay such as the Coalition’s ‘Gears of War’ while the genre ‘Sports’ describes videogames with sports simulation features such as EA’s ‘FIFA’ and ‘Madden NFL’ series. The genres With some genres being more popular than others one might expect there to be some relationship between the genre a game is labeled with and the scores it receives from users and Metacritic. Table 1 provides us with some insight into this and as you can see there does not seem to be a relationship between genre and average Metacritic and user score. First, upon looking at the table the genre with the highest number of videogames are ‘Action’ games by a large margin and the average Metacritic and user score this type of videogame received were on the lower end of the range, falling 3rd to lowest in both categories. The trend does not follow with the genre that has the second highest number of videogames as ‘Sports’ games have the highest overall Metacritic score. This leads me to believe that there exist factors outside of those present in this dataset that could potentially be causing the average scores to fluctuate between genres.

2.1.2 Genre Popularity by Region

A screen shot of a computer

Description automatically generated Due to cultural differences, many genres sell differently in different regions. Table 2 will allow us to see what regions favor specific genre. Looking at the Japan column one can see that RPGs and puzzle videogames on average sell the best out of al the genres. Knowing this information should allow developers to see that the role-playing market is the biggest market in Japan, and therefore if they wish to release an RPG there, they must take extra effort to stand out amongst a crowded category. The same goes for the ‘Shooter’ category in the North American region. However, in the North American region there lies an inconsistency in how the ‘Misc’ category has the highest average sales. This can be confusing as it would mean that games that fall out of the standard definitions of genre sell the best. Figuring out what videogames within that category are causing it to be the leading category would allow us to figure out if it is the work of outliers or otherwise

2.1.3 Rating and Sales in North America

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Description automatically generated When videogames first came out there was no need for a rating system. Then, Mortal Kombat was released to North American arcades in 1993, bringing with it levels of violence unseen before its inception. Shortly after its mainstream popularity spread across the nation there were countless calls for regulation by concerned parents who didn’t want their kids beating virtually decapitating their friends. This led to the creation of the ESRB, a regulatory board that assigned ratings to videogames based on the type of content they contain and restrict their purchase to those who are old enough as defined by that rating. This begs the question of accessibility when designing the kind of videogame, a developer can create. If you make a game that is rated ‘E’, a rating which means that a person of any age can play your game your target audience is much larger than that of an ‘AO’, or adult only. Would creating a game that would receive a mature rating result in lower sales than that of a game that receives a rating that allows anyone to play their game? Figure 1 shows us that seemingly the opposite is true for videogame sales in the North American region. For this figure, the “AO” or “Adult Only” designation has been lumped together with the “M” or “Mature” rating, due to how for both it is advisable that you are older than 18 years to purchase and play that game. Furthermore, the categories of “E”, “E10+”, “EC”, and “K-A” have been collapsed into a single ‘Everyone’ category, reflecting how one can buy these games regardless of age. Finally, “RP” or “Rating Pending” has been combined with the observations that did not have ratings associated with them because games with “RP” have been submitted for review by the ESRB but have not yet received one. As the figure shows, videogames targeted for audiences 18 years and older have the highest sales potential, with the median sales number beating out all other categories. Additionally, the 75th percentile of videogames for mature audiences have the highest earning potential, with the next closest being videogames in the ‘Everyone’ category.

2.1.4 Metacritic Scores Effect on Sales

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Description automatically generated Since a single new videogame usually costs more per unit than other forms of entertainment, many potential customers look to review sites like Metacritic and videogame news outlets like IGN to make informed consumer decisions. However, there are many who place more trust in the reviews of other gamers citing that reviewers can be out of touch with the average gamer or use arbitrary systems to deduct points. For instance, IGN has been criticized frequently for their reviews and multiple former employees have come out and said that review scores can be skewed because of public relations. This difference in opinion leads one to wonder if review scores still meaningfully affect videogame sales. Figure 2 seems to confirm that good Metacritic scores translate into better sales. Starting from a score of a little under 50 on Metacritic the line of regression shows that there is a slight increase in sales associated with an increased score. This shows that there are other factors outside of Metacritic scores that are affecting the sales of these games. Potentially what could be happening is that since these games are scoring well on Metacritic, they might be universally accepted as good games and selling well off of their own merit. This could explain why the line of regression shows a weak but present relationship between Metacritic scores and global sales.

4 Conclusion

Overall, it seems as though there exists a relationship between the type and location that a videogame is released and its success. Research questions that I will be looking to answer moving forward will be if platform influences the average sale of videogames. I hypothesize that there will be some type of relationship between the two variables as releasing a game on the most popular console would allow you to reach the biggest audience.

1. https://variety.com/2019/gaming/news/video-games-300-billion-industry-2025-report-1203202672/ [↑](#footnote-ref-1)