TO MAKE A MOVIE

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Business Overview

- So Microsoft, you've decided to enter into the Film business, and try your luck at making movies.

- The good news is that the Film industry can be a very lucrative business venture considering that the right approach is taken.

- In this presentation, we're going to look at data from the movie industry over the past few years and focus on 3 key factors that can help determine if a movie will be successful in the Box Office:

  - Genre of movie

  - Production budget of film

  - Building on nostalgia or sequels

- We'll then take these factors and see how they can apply to your movie studio's goal of making profitable Box Office hits.

- First let's take a look at some statistics on the film industry.

The Film Industry

▶ As of 2019, the film industry was worth 42.2 billion dollars globally.

▶ The top 3 movie industries in the world are Hollywood, Cinema of China, and Bollywood, which together make up more than half of the total global revenue.

▶ 1.24 billion movie theater tickets were sold in the US and Canada alone.

▶ More than 700 movies are released each year in the United States, but India seems to be the largest producer with 1,500-2,000 movies released each year.

A Successful Movie

▶ So what makes a movie successful?

▶ There are a variety of different factors, ranging from actor's performance to storyline, to box office reviews, etc.

▶ Some of these factors can result in trends that can be seen when examining movie box office data.

▶ Using box office data that spans over a decade, I have identified 3 factors that influence a movie's performance in the box office.

Movie Genre

- ▶ The first factor is movie genre.

- ▶ Movie genre can be an extremely important factor in whether people go to see a movie or not.

- ▶ Everybody has their own unique tastes and may favor certain genres over others, but statistically certain movie genres are more popular than others.

- ▶ However this differs based on the country or location.

- ▶ Because your movie studio is just starting out, it would be a good idea to focus on reaching the domestic audience for your first movie, then focus later on global audience.

- ▶ Therefore we'll only look at popular movie genres in the US (for now).

Popularity of Movie Genres In the US

▶ By far the most popular movie genres in the US are Adventure, followed closely by Action.

▶ The figure below represents the most popular movie genres in the US (and Canada) between 1995 and 2022, measured by total box office revenue.

▶ As we can see the Adventure genre has grossed almost 65 billion dollars over the past 27 years, with Action coming in at a close 50.5 billion.
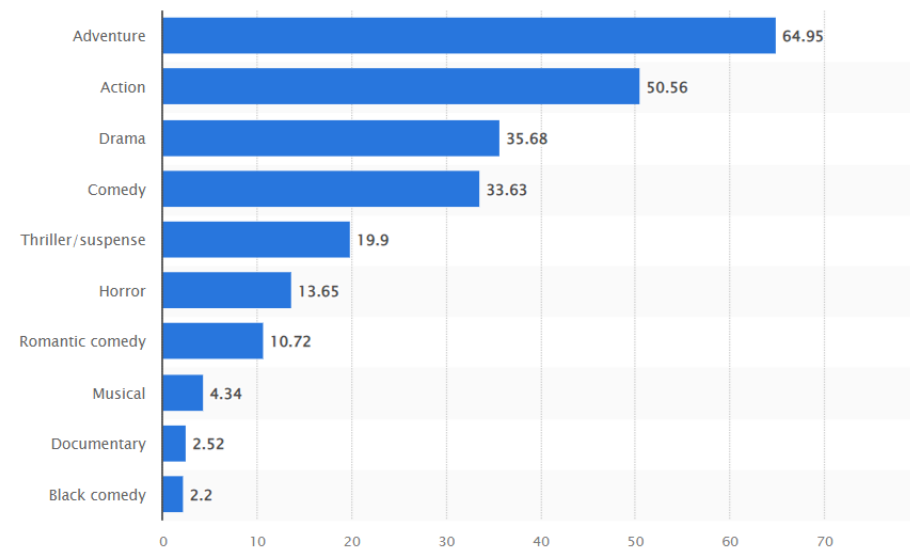
Popularity of Movie Genres In the US

▶ This trend is further supported by data grabbed from IMDB.

▶ The IMDB dataset contained over 85,000 movies along with their ratings, number of people who voted on the rating, the movie director, etc.

▶ When looking at the top 50 most voted movies, more than half of the movies are classified as either action, adventure or both, as shown by the chart.

▶ This trend continued for top 100, 200, etc.
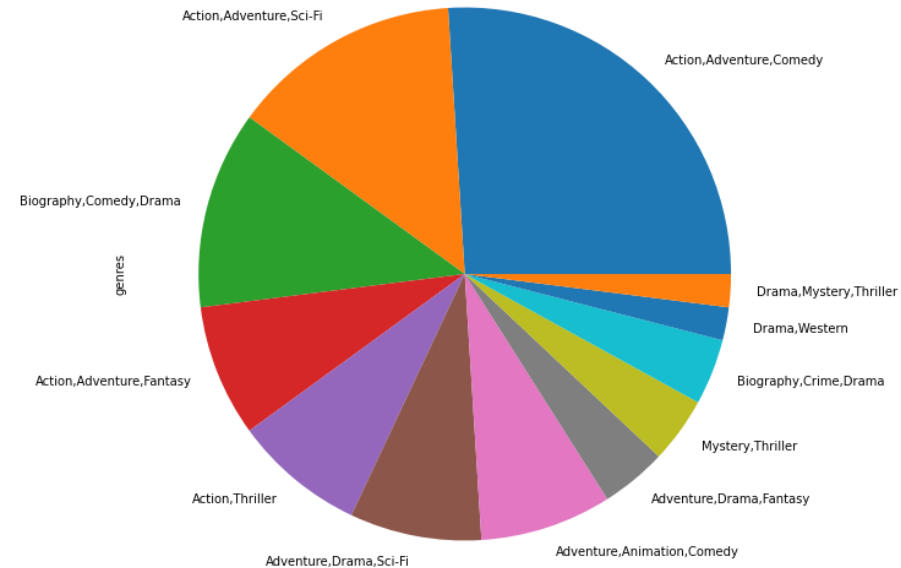
Top Lifetime Grossing movies and Genre

- We can look even further at all time top grossing movies to see this trend.

- Let's look at the top 10 lifetime grossing movies.

- All of these movies are classified as in the adventure or action genre, with the exception of The Titanic, which is in the drama genre.

| Rank	Title	Lifetime Gross	Year
1	Avatar	$2,847,397,339	2009
2	Avengers: Endgame	$2,797,501,328	2019
3	Titanic	$2,201,647,264	1997
4	Star Wars: Episode VII - The Force Awakens	$2,069,521,700	2015
5	Avengers: Infinity War	$2,048,359,754	2018
6	Spider-Man: No Way Home	$1,892,747,988	2021
7	Jurassic World	$1,671,537,444	2015
8	The Lion King	$1,662,899,439	2019
9	The Avengers	$1,518,815,515	2012
10	Furious 7	$1,515,341,399	2015

Production Budget

▶ The second factor that I've identified as an indicator of success is production budget of a movie.

▶ Production costs for making a movie can wildly vary, but on average a movie costs between 100 million and 150 million to make.

▶ But what exactly does production budget include?

Production Budget

- Production budget can include:
  - Paying crew and cast
  - Post production editing
  - Filming and equipment costs
  - Travel
  - Marketing for the movie

Higher Production Budget Correlation

- I wanted to see if there was a relation between production cost and gross box office earnings.

- I took a dataset (from The Numbers) full of various movies, that also contained their production budget as well as domestic and global box office earnings.

- I ran a Pearson's correlation test on production budget and both box office earnings and found a strong relationship as shown in the figures.

- Worldwide box office and production budget had a Pearson's correlation coefficient of 0.748, while Domestic had a PCC of 0.686.

- This suggests that a higher production cost is correlated with higher box office earnings.

Production Budget vs Worldwide Box Office

Production budget vs Domestic Box Office
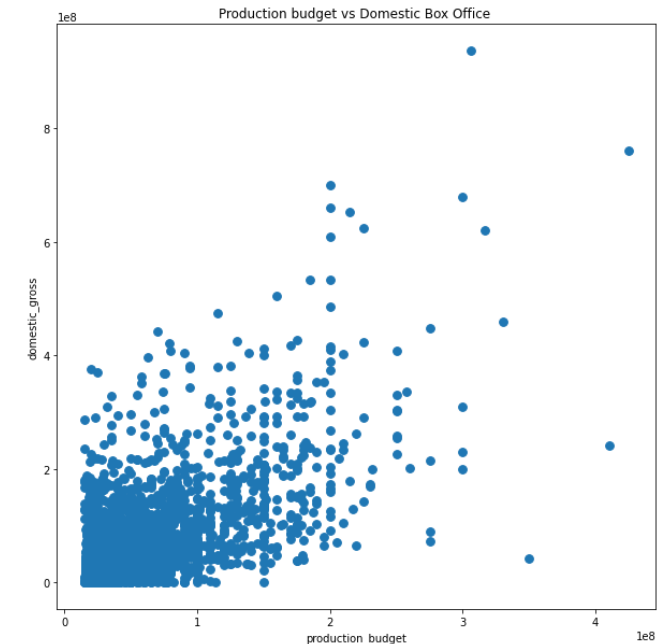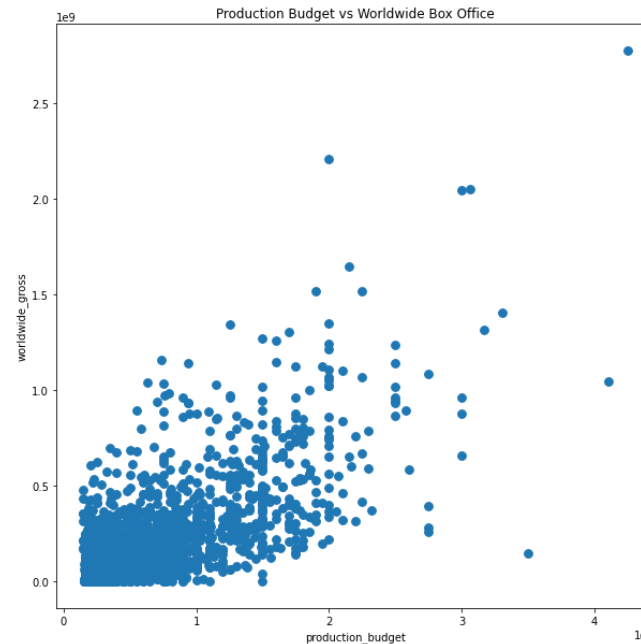
Higher Production Budget Correlation

▶ This is most likely due to the fact that a higher production budget allows for things like better special effects, better actors, better marketing, etc.

▶ However it's important to note that a higher production budget is not always the sole contributor to high box office earnings.

▶ Currently the highest production cost of any movie belongs to Avengers: Endgame, with a production budget of 400 million dollars and a worldwide box office of $2,797,800,564.

▶ Not every movie can have that kind of budget though, and there are several low budget movies whose budget ranged from $60,000 to 11 million, that did well in the box office.

▶ Oftentimes these movies would make more than quadruple their budget in box office earnings.

▶ Surprisingly, many of these are films that we know and love such as Star Wars, The Blair Witch Project, Rocky, Saw, etc.

Sequels and Box Office

▶ This brings me to my last factor: Whether or not a movie is a sequel or builds on a preexisting series.

▶ My theory was that movie sequels and movies that build on preexisting older movie series will do especially well in the box office, because studios play on people's nostalgia.

▶ While looking through a dataset from Box Office Mojo containing over 3000 movies and their domestic/foreign box office earnings, I noticed a trend that supported my theory.

Sequels and Box Office Trend

▶ When looking at the top domestic grossing and top foreign grossing movies, I was seeing a lot of 2's, 3's, and colons, all of which are indicative of sequels.

▶ Furthermore, the highest domestic grossing movie ("Star Wars: The Force Awakens") and the highest foreign grossing movie ("Avengers: Infinity War") were both sequels of well established series.

▶ Let's take a look at the two series

title	studio	domestic_gross	foreign_gross	year
Star Wars: The Force Awakens	BV	936700000.0	1131561399	2015
Black Panther	BV	700100000.0	646900000	2018
Avengers: Infinity War	BV	678800000.0	1369544272	2018
Jurassic World	Uni.	652300000.0	1018130012	2015
Marvel's The Avengers	BV	623400000.0	895500000	2012
Star Wars: The Last Jedi	BV	620200000.0	712400000	2017
Incredibles 2	BV	608600000.0	634200000	2018
Rogue One: A Star Wars Story	BV	532200000.0	523900000	2016
Beauty and the Beast (2017)	BV	504000000.0	759500000	2017
Finding Dory	BV	486300000.0	542300000	2016
Avengers: Age of Ultron	BV	459000000.0	946400000	2015
The Dark Knight Rises	WB	448100000.0	636800000	2012
The Hunger Games: Catching Fire	LGF	424700000.0	440300000	2013
Jurassic World: Fallen Kingdom	Uni.	417700000.0	891800000	2018
Toy Story 3	BV	415000000.0	652000000	2010
Wonder Woman	WB	412600000.0	409300000	2017
Iron Man 3	BV	409000000.0	805800000	2013
Captain America: Civil War	BV	408100000.0	745200000	2016
The Hunger Games	LGF	408000000.0	286400000	2012
Jumanji: Welcome to the Jungle	Sony	404500000.0	557600000	2017
Frozen	BV	400700000.0	875700000	2013

| title	studio	domestic_gross	foreign_gross	year
Avengers: Infinity War	BV	678800000.0	1369544272	2018
Furious 7	Uni.	353000000.0	1162040651	2015
Star Wars: The Force Awakens	BV	936700000.0	1131561399	2015
Jurassic World	Uni.	652300000.0	1018130012	2015
The Fate of the Furious	Uni.	226000000.0	1009996733	2017
Harry Potter and the Deathly Hallows Part 2	WB	381000000.0	960500000	2011
Avengers: Age of Ultron	BV	459000000.0	946400000	2015
Marvel's The Avengers	BV	623400000.0	895500000	2012
Jurassic World: Fallen Kingdom	Uni.	417700000.0	891800000	2018
Frozen	BV	400700000.0	875700000	2013
Wolf Warrior 2	HC	2700000.0	867600000	2017
Transformers: Age of Extinction	Par.	245400000.0	858600000	2014
Minions	Uni.	336000000.0	823400000	2015
Aquaman	WB	335100000.0	812700000	2018
Iron Man 3	BV	409000000.0	805800000	2013
Pirates of the Caribbean: On Stranger Tides	BV	241100000.0	804600000	2011
Skyfall	Sony	304400000.0	804200000	2012
Transformers: Dark of the Moon	P/DW	352400000.0	771400000	2011
Despicable Me 3	Uni.	264600000.0	770200000	2017
Beauty and the Beast (2017)	BV	504000000.0	759500000	2017
Captain America: Civil War	BV	408100000.0	745200000	2016

Star Wars

- The first Star Wars film "*Episode IV: A New Hope*" came out in 1977.

- The film had a smaller budget of 11 million, and initially opened in only 42 theatres.

- However it was an almost instant hit, and would reach over 700 million dollars in worldwide box office revenue.

- It would go on to change everything from the popularity of Science Fiction as a genre, to special effects, to merchandising as we know it.

- Two more movies were released in 1980 and 1983, then 16 years later, a new trilogy was introduced with "*Star Wars Episode 1: The Phantom Menace*".

- By the time the sixth Star Wars movie came out in 2005, the franchise had already brought in over 19 billion dollars.

Star Wars

▶ Then, ten years later "*Star Wars Episode VII: The Force Awakens*" came out, and took the box office by storm.

▶ The film itself grossed 2 billion worldwide and broke several records including highest worldwide opening weekend, highest IMAX single day gross, and fastest film to gross 1 billion dollars.

▶ In the figure presented, you can see the success in box office each time a new Star Wars Trilogy movie is introduced with *The Force Awakens* being the most successful.

In USD millions
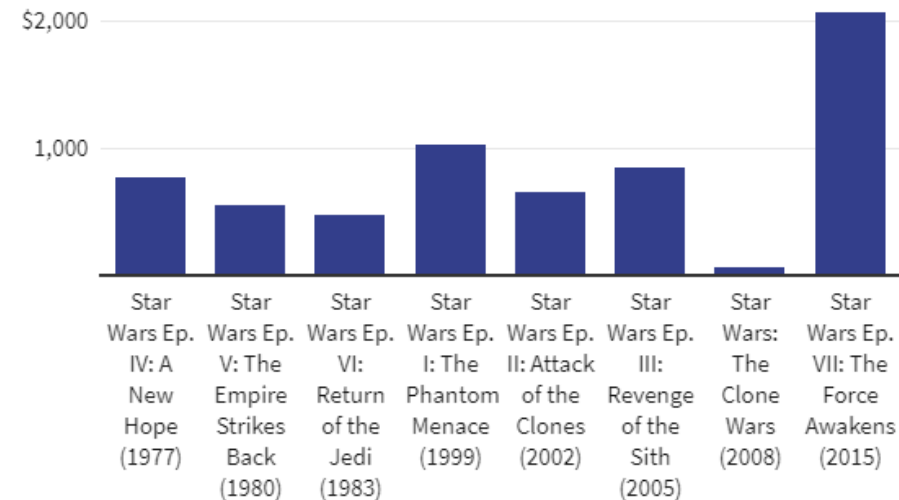
The Marvel Franchise

- The Marvel Franchise is a little complex full of reboots and several different phases which introduced various comic book heroes into the Marvel cinematic universe, so for simplicity we'll start with *Iron Man*.

- *Iron Man* came out in 2008, and at the time Marvel was a small independent company.

- *Iron Man* did well, grossing over 585 million dollars.

- So well in fact that in 2009, Disney bought Marvel, and the rest is history.

The Marvel Franchise

▶ After that, Disney started releasing movies like clockwork.

▶ Disney developed a pattern where movies like *Captain America: The First Avenger, Thor, Guardians of the Galaxy, Ant Man, Doctor Strange* etc, would come out and introduce new heroes, and then release one giant movie that would combine all the heroes into one.

▶ These giant movies such as *The Avengers, Avengers: Age of Ultron, Avengers: Infinity War* , would be box office hits.

▶ The figure shown on the right shows this trend, which supports the idea that movies that build on older movies tend to do well.

Marvel Cinematic Universe - Domestic / Foreign Box Office
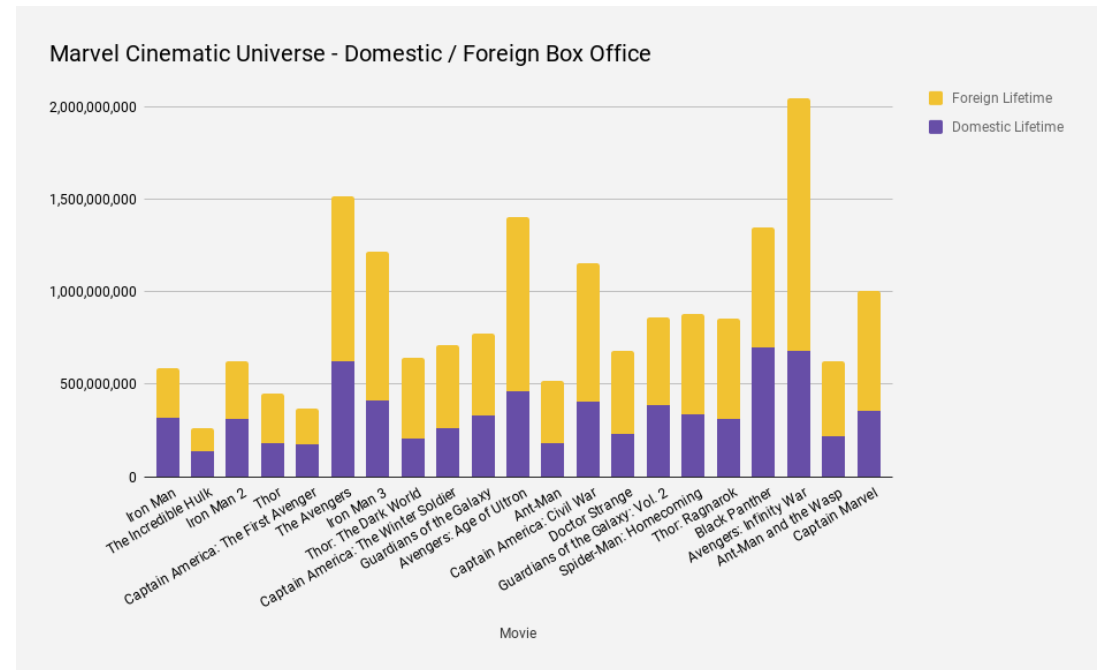
Recap

▶ 3 factors to focus on for a successful movie were suggested:

- Genre of movie

- Production budget of film

- Building on nostalgia or sequels

▶ Each of these factors have been examined carefully using data and data analysis procedures from various sources.

▶ What follows next are my suggestions per each factor.

Genre Suggestions

- Adventure has been consistently shown to be the top genre in the US, followed by action.

- Therefore to build a solid foundation for an audience, it is suggested that your first movie should be in the adventure genre.

- However to have a successful action movie, you also need a solid story/script and a good director as well.

- Therefore getting big name action genre directors like Christopher Nolan or Joe Russo involved would be highly suggested.

- Once successful movies have been established by your studio, then you can start branching out into other genres

Production Budget Suggestions

▶ As mentioned before the average Production Budget is between 100 and 150 million dollars.

▶ This is a good price point to keep it around, but if the budget needs to be stretched for things like improved special effects or hiring certain prestigious actors, then it should be done.

▶ Special effects in particular can be important, especially if you're making an adventure movie, with elements of action but don't overdo it.

▶ The budget should also be used for things like marketing, travel, and equipment.

Sequel and Nostalgia Suggestions

▶ As shown earlier, movies that build on older movies in the series as well as sequels do well in the box office.

▶ Some examples are Star Wars and the Marvel cinematic universe movies.

▶ My suggestion is that you pick a movie series that does not have many entries in the series and build upon it from there or try your hand at rebooting a series.

▶ There are several movies/movie series out there that haven't seen a new release in years that would fill the audience with nostalgia.

▶ Some examples that come to mind are several Stephen King movies, the *Rush Hour* series, the *Sherlock Holmes* series, just to name a few.

Afterthoughts

- Microsoft also produces video games, including classic series with diehard fans like *Halo* and *Gears of War*, yet no movie for either series has been made.

- A *Halo* live action movie could prove to be lucrative as it would play on many an adult's nostalgia of their early days of playing Halo, and the *Halo* series has a strong and compelling story ready to be told on the big screen.

- Covid greatly interrupted the film industry, and brought all new popularity to streaming services like Disney+, Netflix, Hulu, etc.

- These streaming services often have the option to watch movies from home instead of the theater, which a recent study showed people actually prefer.

- Therefore it may be a smart business move later on to either partner with a streaming service to produce movies, or create a new Microsoft movie streaming service.

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QUESTIONS?