

Launching XBoxOffice

Repeating success in the family room at the silver screen.

Summary

- Microsoft hired FurPig Inc to investigate the best film genres, release months, and creative personnel to begin their movie business.
- FurPig Inc analyzed a thousand films from a variety of databases.
- FurPig recommends to continue looking at what kinds of films to make in the action and adventure genres of film.
- More analysis is needed before initiating such a venture.

Outline

- Business Problem
- Data Analyzed
- Methodology: Independent/Dependent Variables
- Business Questions
- Question 1: Genre
- Question 2: Month
- Question 3: Creatives
- Conclusions

Business Problem

- Microsoft's strong representation in the fields of personal computing, business computing, and interactive entertainment needs to expand into other forms of popular media to stay competitive and attract new customers. Microsoft wishes to investigate the best way to expand into the blockbuster movie industry.
- Microsoft faces competition from the five titans of the film industry:
 - Walt Disney/20th Century Fox
 - Warner Brothers
 - Sony/Columbia
 - Universal Studios
 - Paramount Pictures
- Microsoft commissioned Data Science firm FurPig Inc. to recommend best practices to succeed in this new initiative. FurPig Inc. assigned Data Scientist Greg Osborne to the project.

Data Analyzed

For the analysis, FurPig Inc. looked at four datasets and considered a fifth:

Data Base	Primary data gleaned
Internet Movie Database (IMDB)	Runtime, Genres, creative personnel
Box Office Mojo (BOM)	Film Studio, Box office data (discarded)
Rotten Tomatoes (RT)	This dataset did not include any specific films, so we didn't use it
The Movie Database (TMDB)	Month and year of release for each film
The Numbers (TN)	Production Budget, Domestic/foreign/worldwide Box Office totals

Methodology: Driving metric / dependent variable

- There are two reasons for this initiative:
 1. Make a profit on the films
 2. Build a reputation with the public of quality entertainment for Microsoft's brand
- Microsoft is not looking to create fodder for the pretentious crowd, generating buzz at film festivals and ignored by the public upon wider release. Microsoft wants its new movie brand—Working title: XboxOffice—to be recognized by as many people as possible.
- Since this is new a initiative for Microsoft, and the whole point is getting as many people to see these films as possible, the driving metric for our analysis will be box office dollars, because that's the metric that's closest to ticket sales.
- Our dependent variable will be box office dollars.

Methodology: Independent Variables

- Microsoft contracted FurPig to select three independent variables—that is, three decisions that Microsoft would have complete control over during the selection of which films to produce—and see how changing these three variables yields different box office revenue.
- How can we change these variables to make make box office revenue as large as possible?
- The three variables selected by FurPig are:
 1. Genre
 2. Release month
 3. Creative Personnel (Writer, Director, Producer, Actor, Actress)

Business Questions

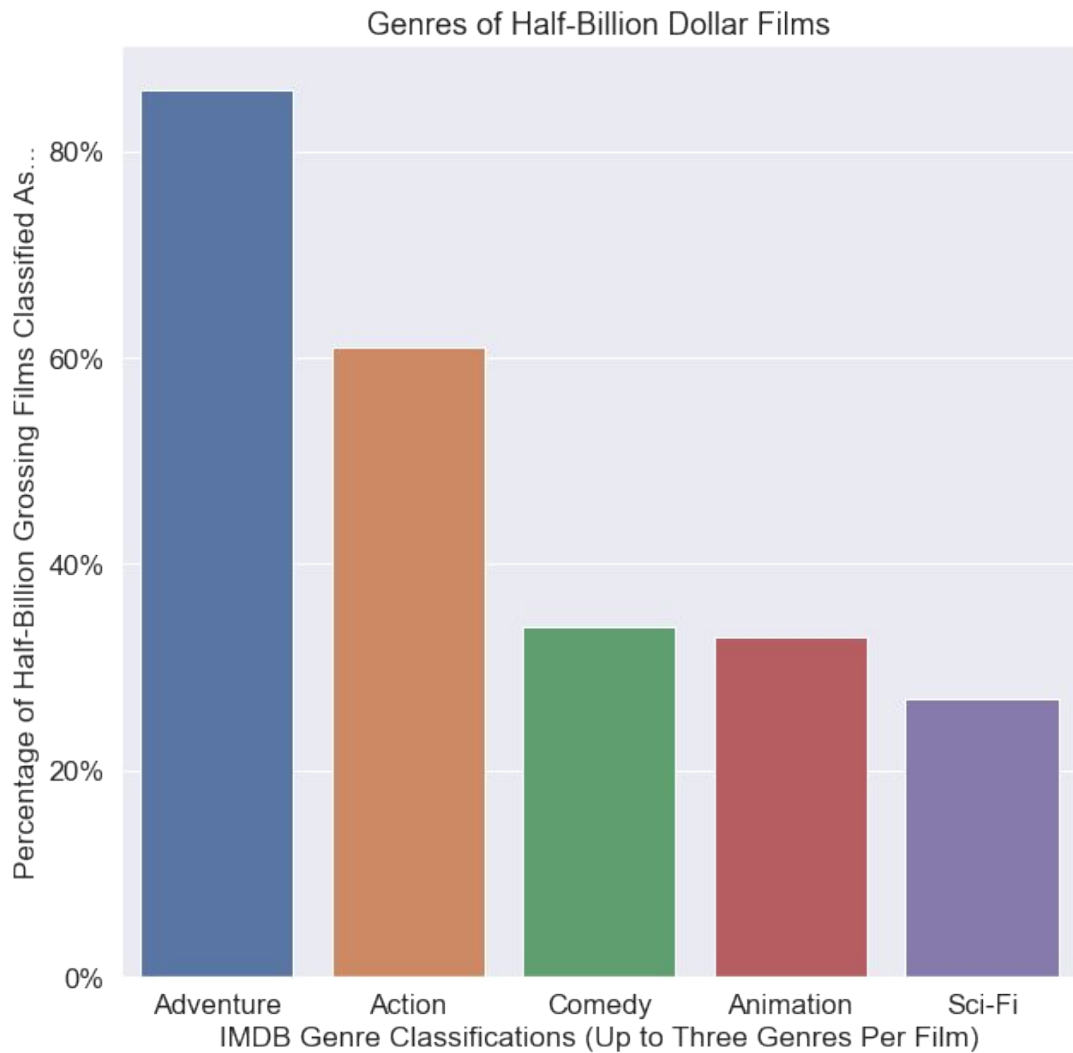
Now that we know the goal and which variables to analyze, we will develop our business questions:

1. What genres of film produce the highest box office revenue?
2. What is the best month to release a film to generate the most revenue?
3. What writers, directors, producers, actors and actresses have the highest revenue earning potential?

Question 1: Genre

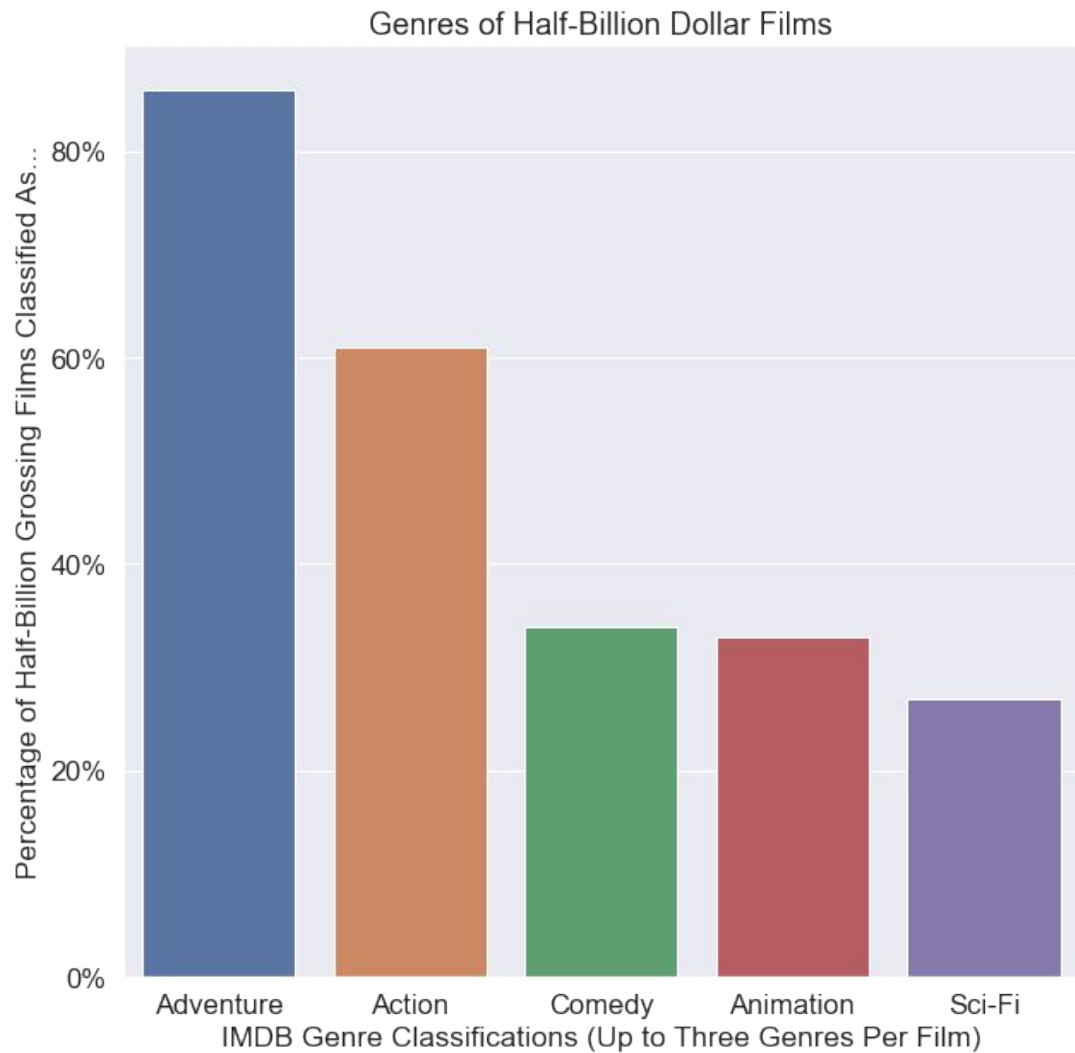
Question 1: What genres of film produce the highest box office revenue?

- After I finished combining the data available, I had 1000 films to compare. Of those 1000 films, I had 100 that grossed half a billion dollars.



Question 1: Genre

- I took those 100 top grossing films and identified which genres they were classified as. IMDB allows up to three genres per film.
- The results show that over half of the half-billion grossing films included the genres action and adventure.



Question 1: Genre, IMDB Definitions

Adventure: Should contain numerous consecutive and inter-related scenes of characters participating in hazardous or exciting experiences for a specific goal. Often include searches or expeditions for lost continents and exotic locales, characters embarking in treasure hunt or heroic journeys, travels, and quests for the unknown. Not to be confused with Action, and should only sometimes be supplied with it. Subjective.

Examples: The Goonies (1985) The Lord of The Rings: The Fellowship of the Ring (2001) | Life of Pi (2012)

Action: Should contain numerous scenes where action is spectacular and usually destructive. Often includes non-stop motion, high energy physical stunts, chases, battles, and destructive crises (floods, explosions, natural disasters, fires, etc.) Note: if a movie contains just one action scene (even if prolonged, i.e. airplane-accident) it does not qualify. Subjective.

Examples: Die Hard (1988) | The Avengers (2012) | Wonder Woman (2019)

These definitions are copied straight from the IMDB website ([Link](#))

Question 1: Genre, Question Answered?

Question 1: What genres of film produce the highest box office revenue?

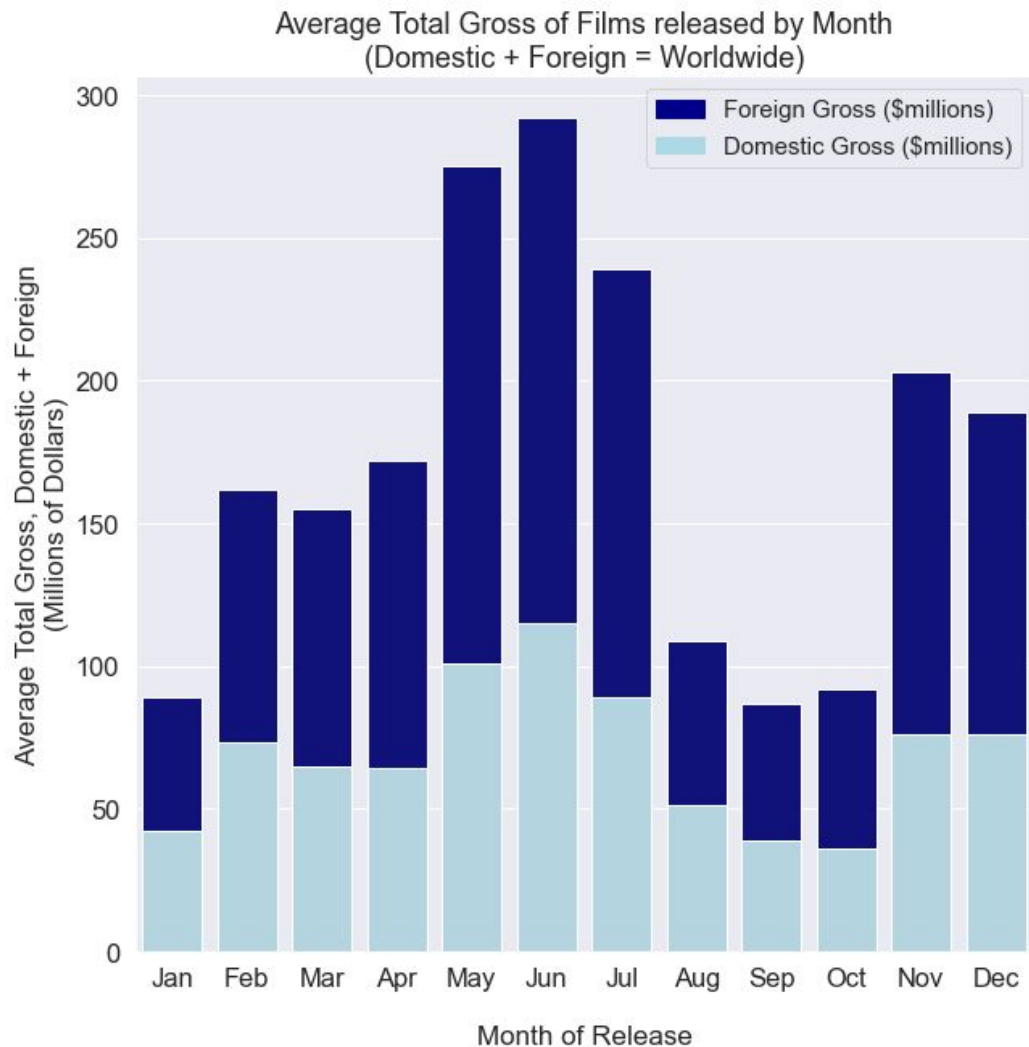
My analysis has answered this question as well as it can be, however the question itself has flaws. By IMDB's own admission, most film genres are subjective. What one person finds funny, another might find disturbing. What one person finds adventurous, another finds timid. But if we accept the widely understood definitions of these classifications, then the analysis is sound. Action and adventure films do the best at the box office.

To parse genre considerations beyond generalities is an exercise in art criticism, not business analysis.

Question 2: Month

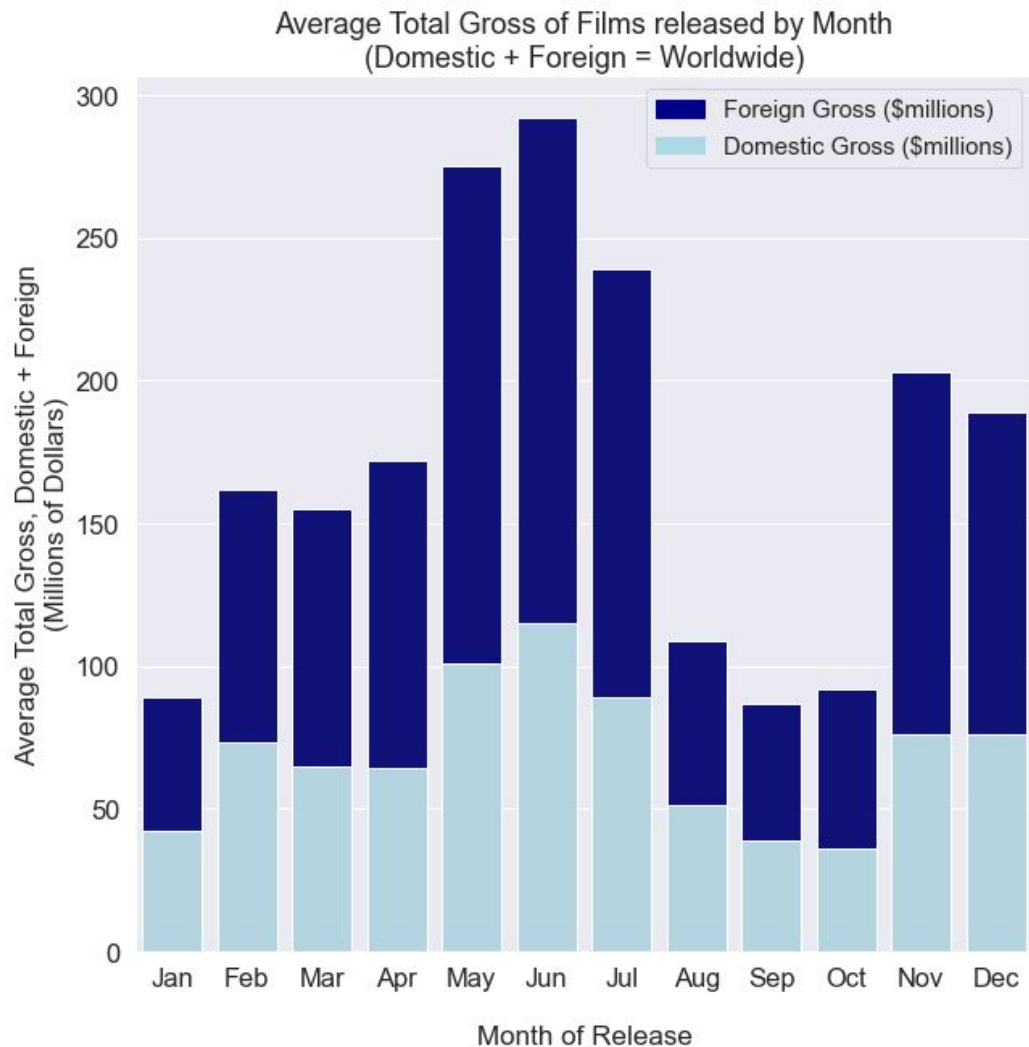
Question 2: What is the best month to release a film to generate the most revenue?

- For this question, I divided the films into twelve categories representing their release month.
- The graph shows foreign and domestic, which add together to get the worldwide gross.



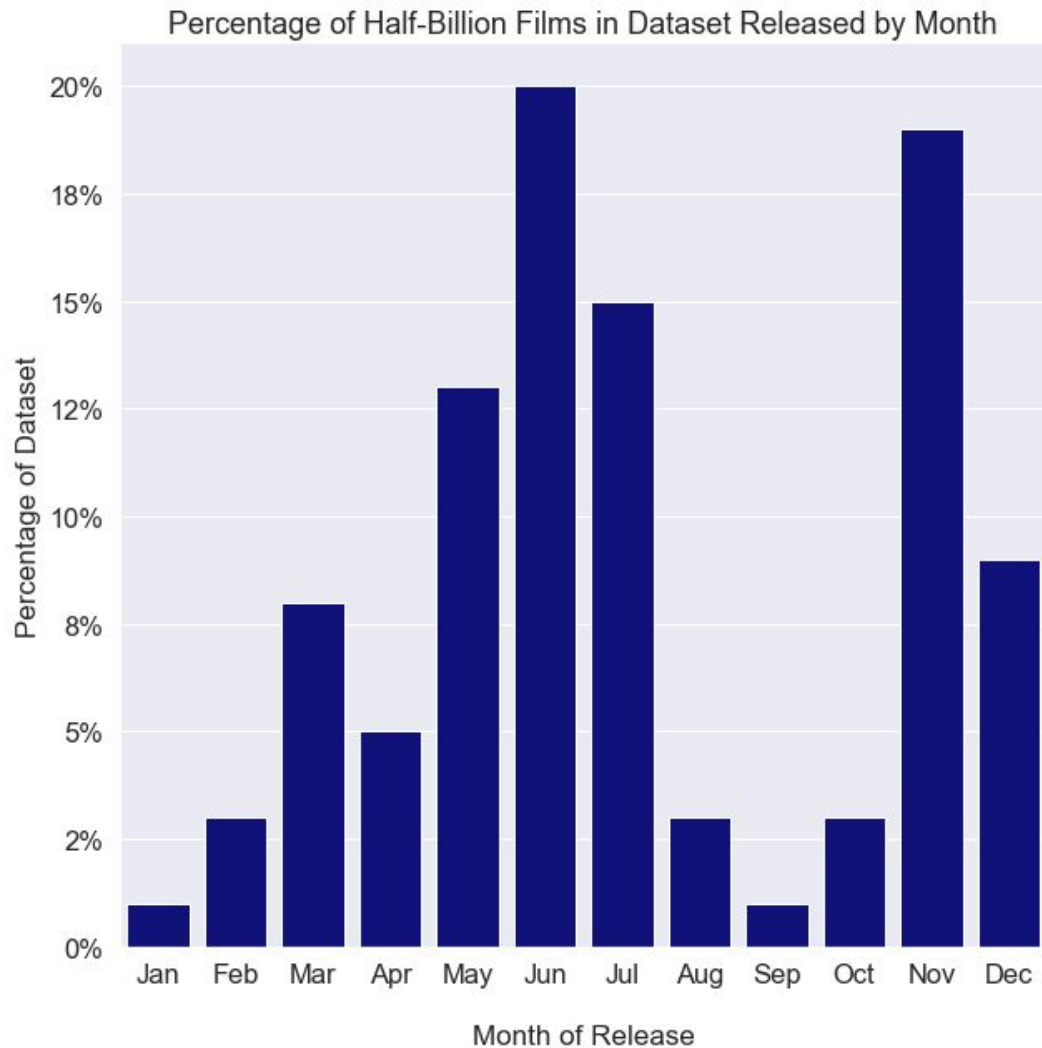
Question 2: Month

- There are two seasons a year that offer the greatest revenue potential for a movie release:
- May–July
November–December.



Question 2: Month

- I also wanted to see if the half-billion dollar films follow this trend, and they do, to a point.
- It's worth noting that there are films that made half a billion dollars that were released during the slowest months of the year.



Question 2: Month, Question Answered?

Question 2: What is the best month to release a film to generate the most revenue?

This question ignores a lot of outside factors regarding release dates. A more thorough analysis would be to separate the films by week instead of month, but even that doesn't go far enough. There are so many events that occur outside of a regular calendar year. It could be that a popular video game was released one week, so people stayed home rather than pay for a film. Also, choosing a release date needs to consider what the competition is doing. We don't want to release a movie that targets the same audience as a Marvel film the same week a Marvel film debuts.

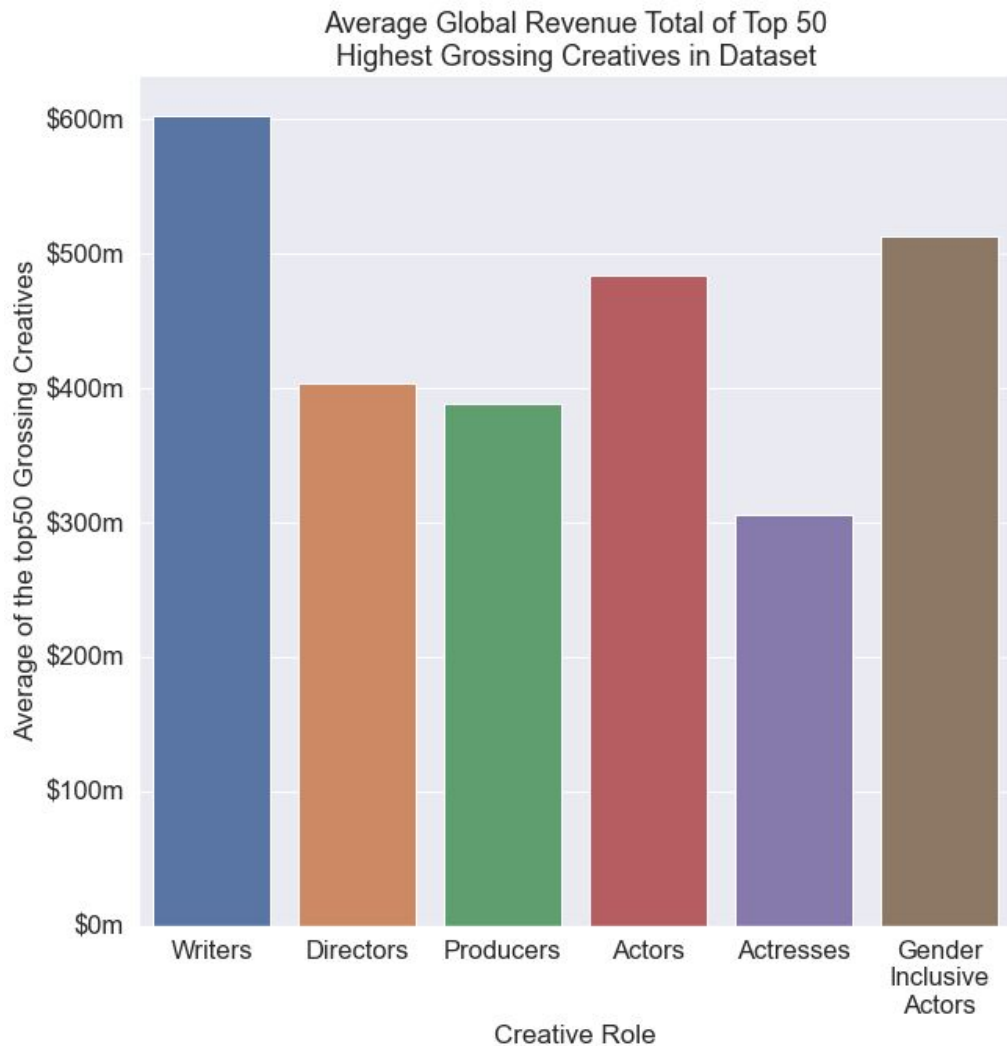
Question 2: Month, Question Answered?

The business question has been answered as well as it can be with the data given, however, more analysis needs to be done to choose a release date for a film.

Question 3: Creatives

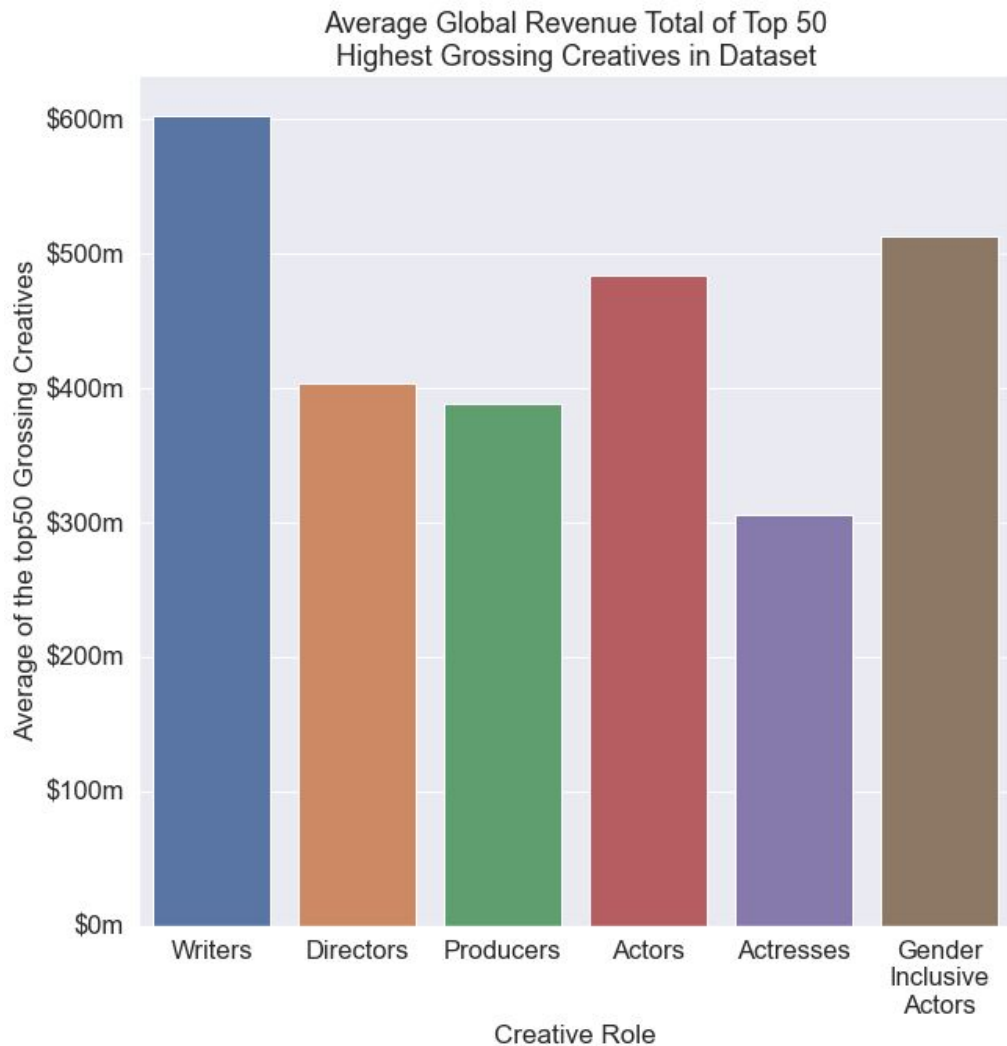
Question 3: What writers, directors, producers, actors and actresses have the highest revenue earning potential?

- For this analysis, I started with an analysis of which creatives of those five categories had the highest impact on total revenue.



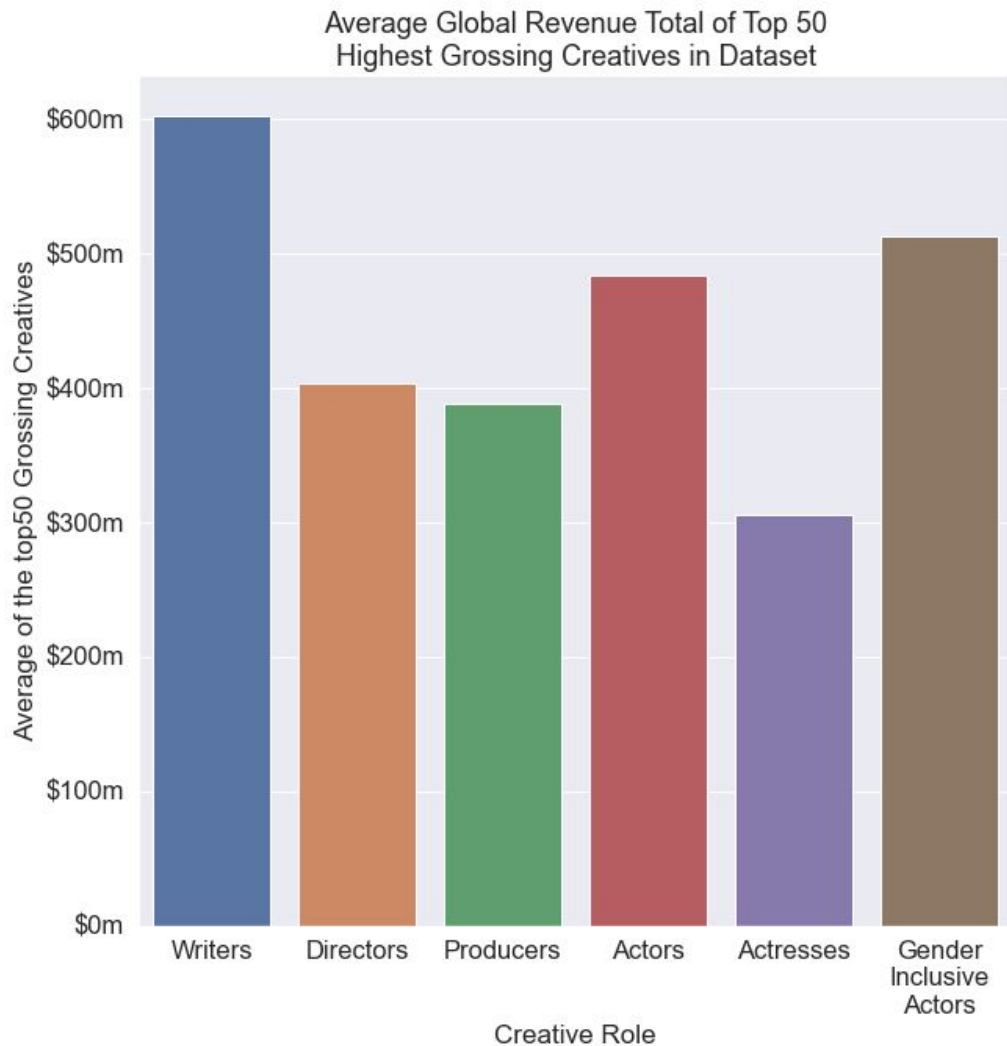
Question 3: Creatives

- First, I calculated the average worldwide revenue for each person who worked on a film in the whole dataset.
- I took the top 50 top grossing creatives from each category and averaged each set. As you can see, a good screenwriter seems to influence a film's profitability more than anything else.



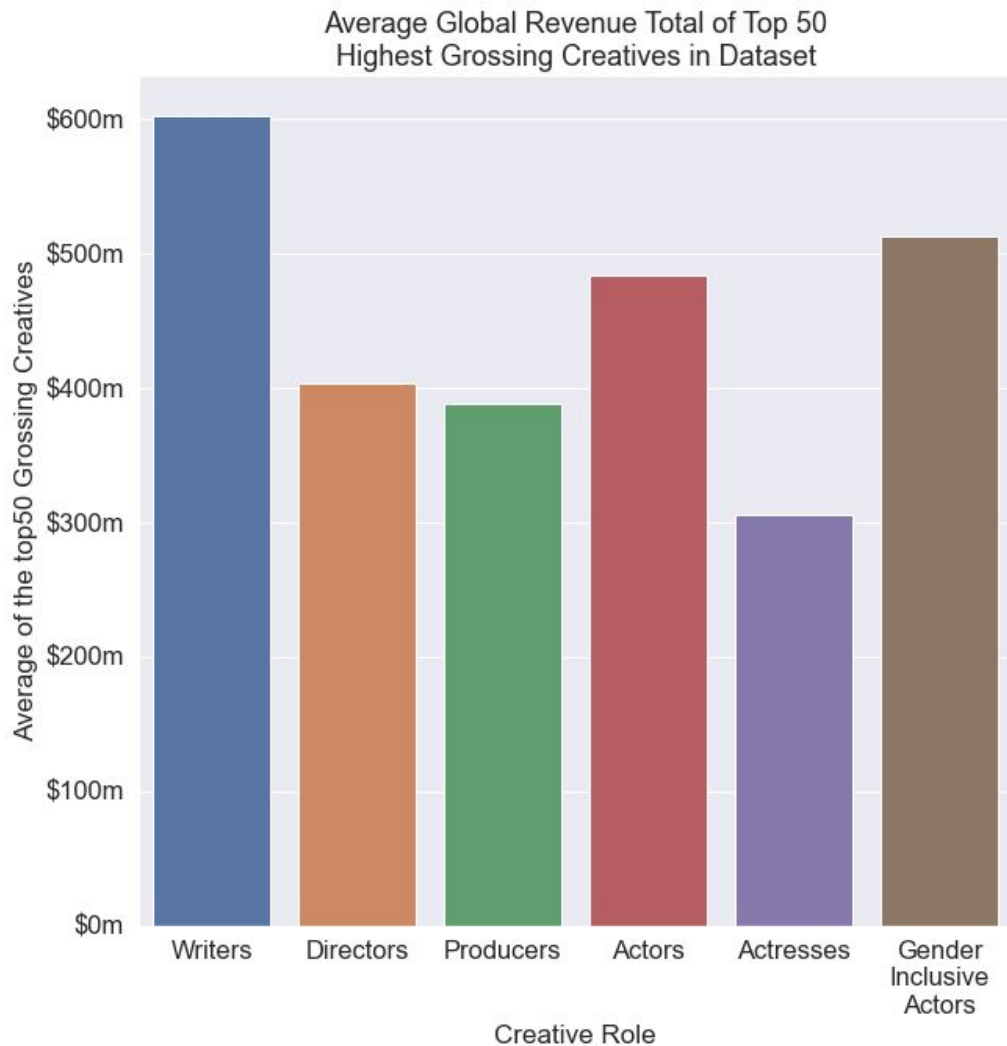
Question 3: Creatives

- Second was actors. Since the data I had was already divided into actresses and actors, I kept that distinction.



Question 3: Creatives

- Despite the data, we cannot make movies without actresses. For both ethical and public-relations reasons I strongly advise against pay disparity between male and female actors.
- Put the same emphasis on both for planning decisions.



Question 3: Creatives

- Obviously more consideration is needed when hiring creatives, and more data is available, but here are the highest earning writers, actors and actresses.

Rank	Writer's name	Actor's name	Actress's name
1	Guillermo del Toro	Richard Armitage	Sandra Bullock
2	Christopher Markus	Ian McKellen	Bryce Dallas Howard
3	Stephen McFeely	Robert Downey Jr.	Evangeline Lilly
4	Derek Connolly	Chris Evans	Scarlett Johansson
5	David S. Goyer	Chris Pratt	Eloise Mumford
6	Chris McKenna	Chris Hemsworth	Anne Hathaway
7	Erik Sommers	Benjamin Bratt	Holly Hunter
8	Philippa Boyens	Andy Serkis	Judi Dench
9	Fran Walsh	Mark Ruffalo	Angelina Jolie
10	Suzanne Collins	Martin Freeman	Emily Mortimer

Question 3: Creatives, Question Answered?

Question 3: What writers, directors, producers, actors and actresses have the highest revenue earning potential?

Similar to month, there are many other factors to consider when hiring writers and actors. For starters, is someone who pays to go see Hobbit 2: Desolation of Smaug really going because Evangeline Lilly is in the film, or are they going to see a fantasy adventure film set in the same world as the Lord of the Rings films they saw when they were eleven? Considering how much pull a writer or actor has on an audience has its natural limits.

That being said, we do know which creatives had starring roles in the highest grossing films, but we don't know how prominent a role the actors played in the film, or how the marketing pushed each film.

Question 3: Creatives, Question Answered?

We do know which creatives had starring roles in the highest grossing films, but we don't know how prominent a role the actors played in the film, or how the marketing advertised each film. Was the film billed as the latest thriller from Steven Spielberg, the latest Star Wars Movie, or Angelina Jolie's role of her career?

We know which people were attached to the highest-grossing films ever released, but we don't know how much draw their names had to the audience.

Conclusions

This analysis is limited by time and budget. There are many other factors to consider when trying to launch a film business. Some areas to consider looking into before producing a film are:

- How much do existing franchises influence the public's film choices?
- If existing film franchises have a lot of draw, does the public have the appetite for more after they've already spent a lot of time and money on the existing franchises?
- Should Microsoft find an existing property and option it for film or start new?
- Is streaming a better option for building the brand and generating revenue?
- Should Microsoft purchase one of the big studios instead of entering the competition?

Conclusions

Rather than make a specific recommendation for which kinds of films to greenlight, I strongly recommend more research.

However, the analysis I've done leads to these three conclusions:

1. The public likes action and adventure films.
2. The best release windows are May–July and November–December.
3. Writers and actors are the best creative personnel to increase a films revenue potential.

I think more time spent in answering the questions on the slide above would go a long way in helping Microsoft be successful with their film aspirations.

Thank You!

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