

Microsoft Movie Studios

Exploration of box offices successes and failures

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Overview

This analysis is designed to guide Microsoft through the early stages of film development and production.

We aim address the following questions:

- What is the relationship between production budget and box office revenue?
- Which genres are the safest bets for the first few films?
- What MPAA rating makes the most sense for return on investment?

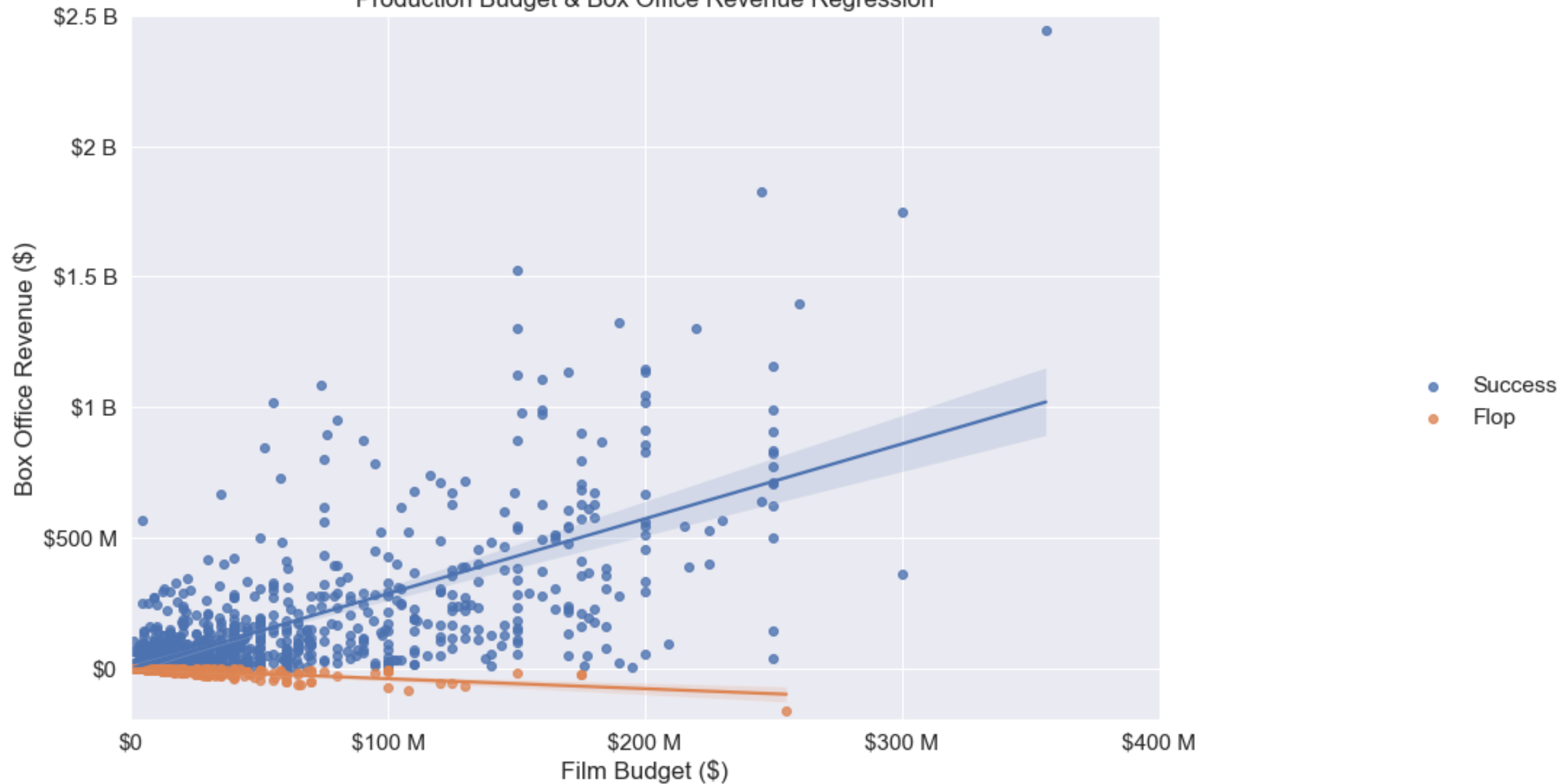
Methodology

All data was sourced from The Movie Database (TMDB) using their provided API.

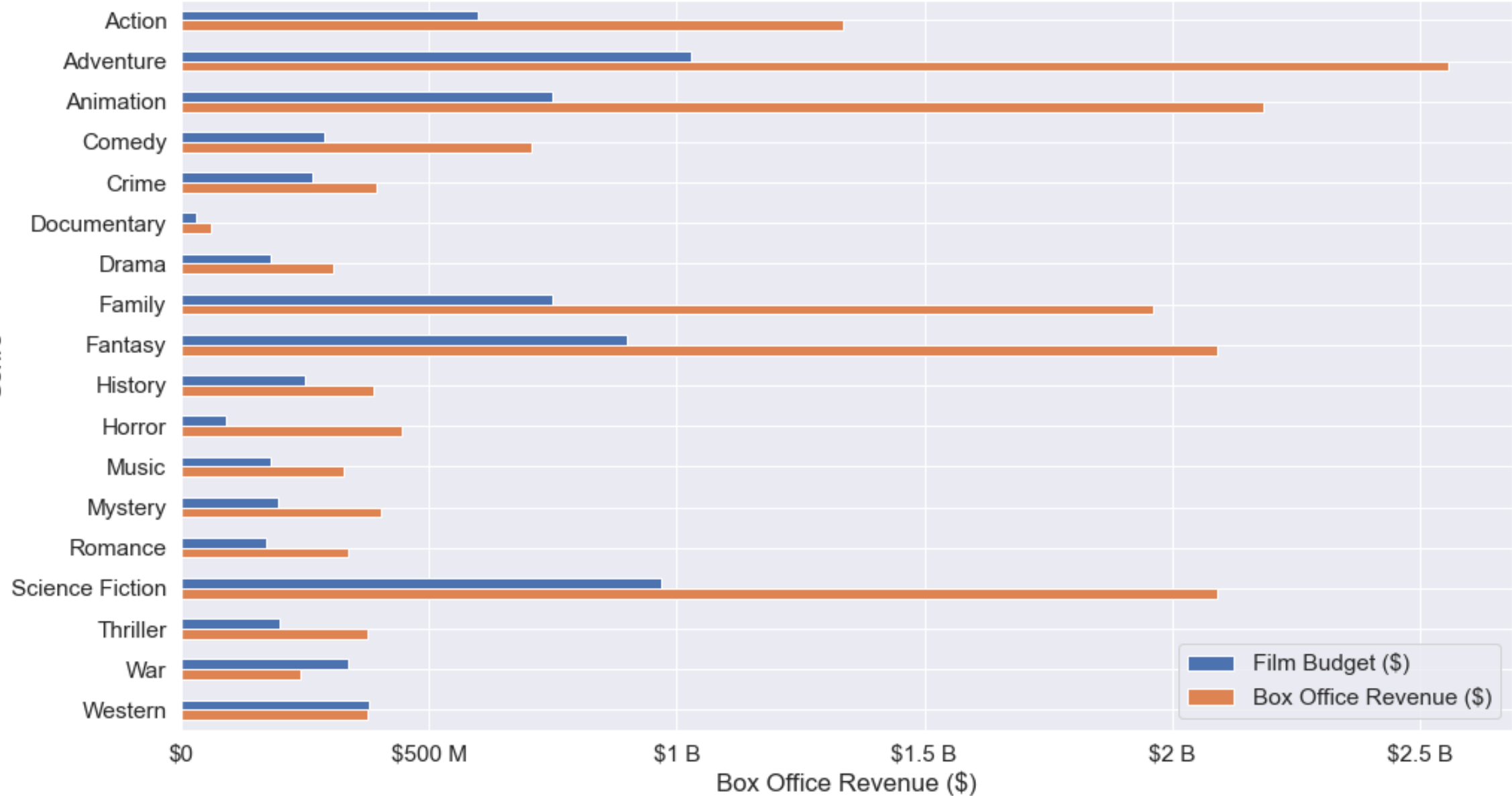
The following filters were applied:

- Release year 2012-2019
- Production budgets exceeding \$1 million
- Box office revenues greater than \$0
- Runtimes longer than 80 minutes
- English language
- Wide theatrical release (i.e. no premiere or limited releases)

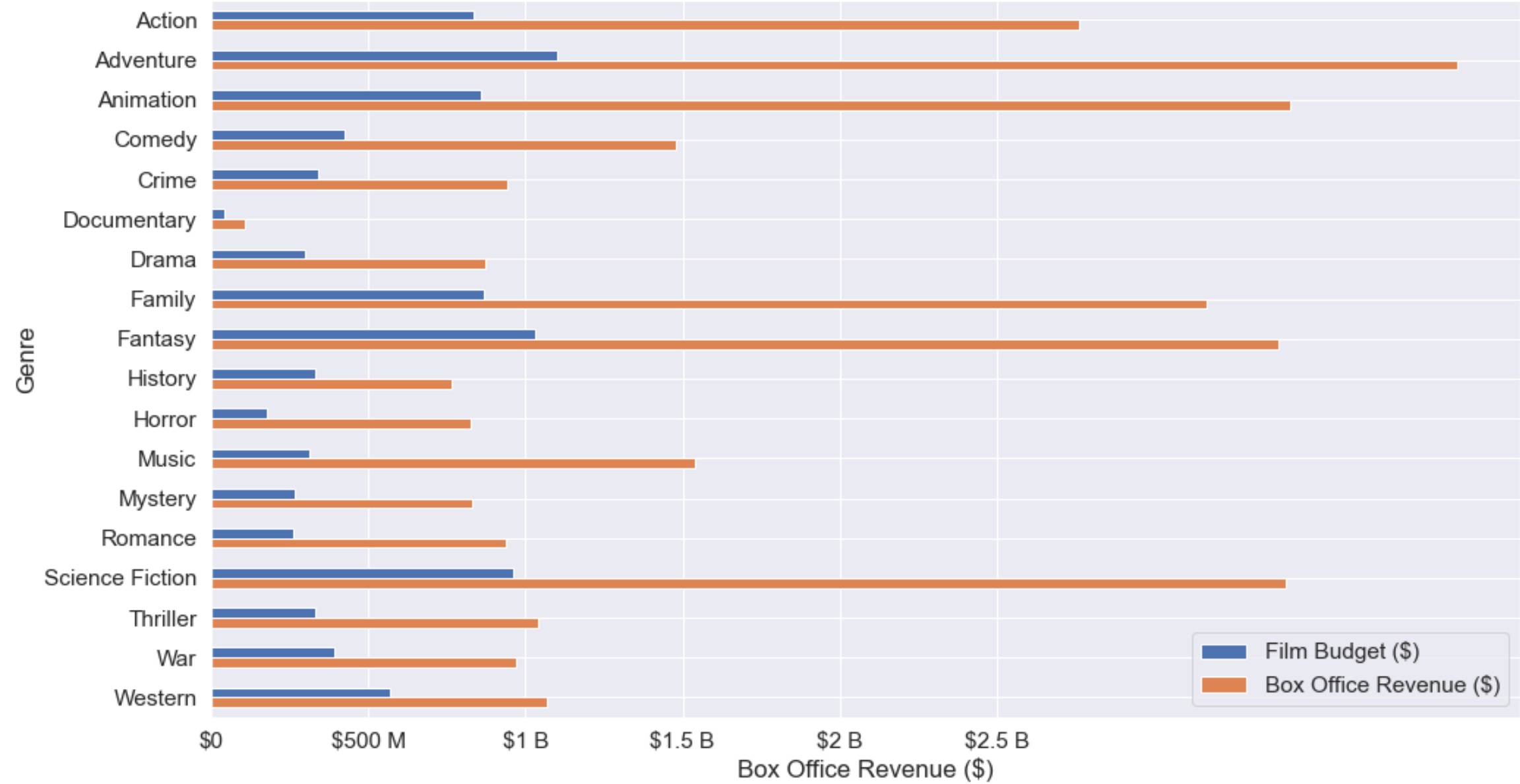
Production Budget & Box Office Revenue Regression



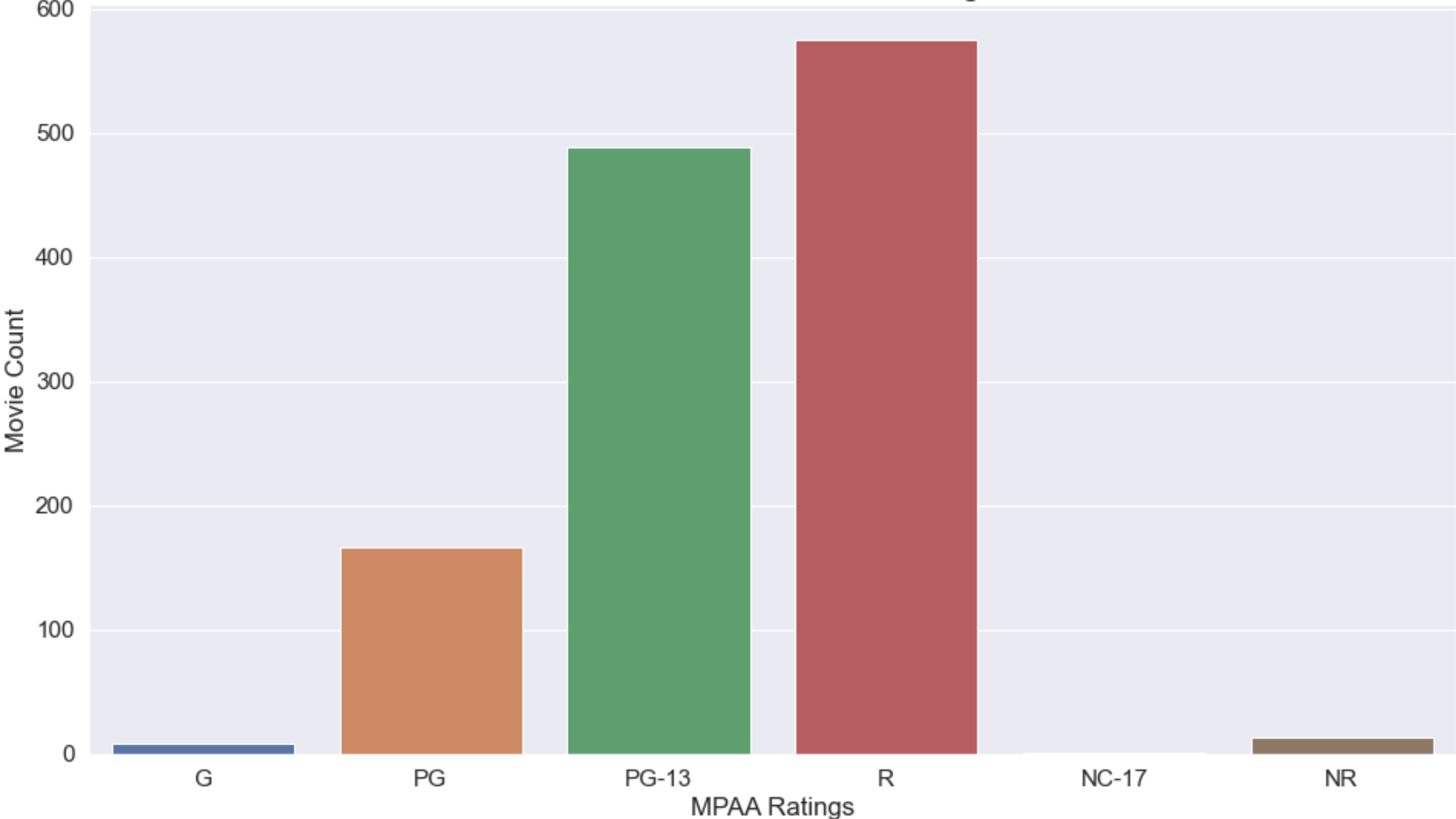
Median Production Budget and Box Office Revenue by Genre



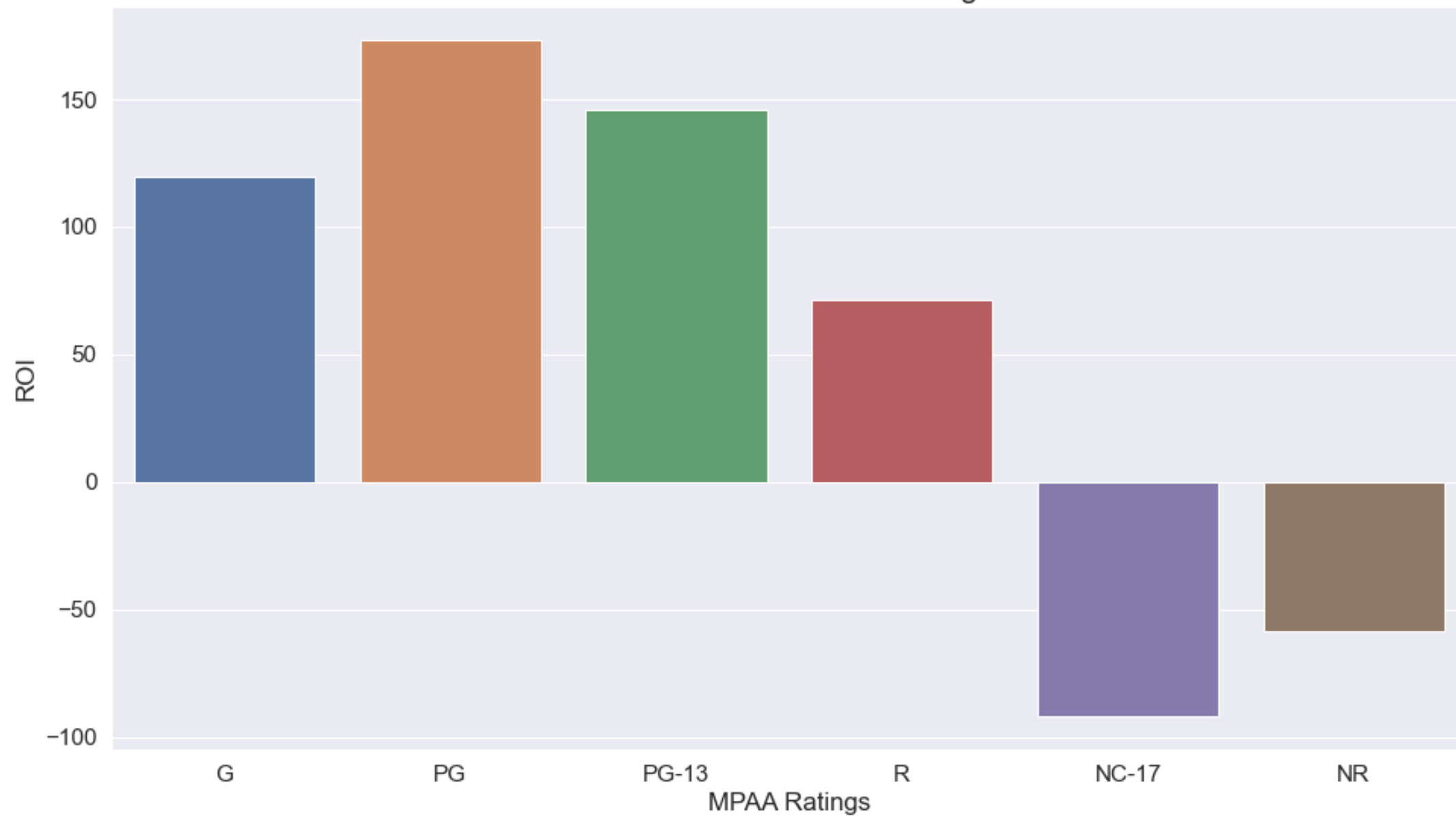
Mean Production Budget and Box Office Revenue by Genre



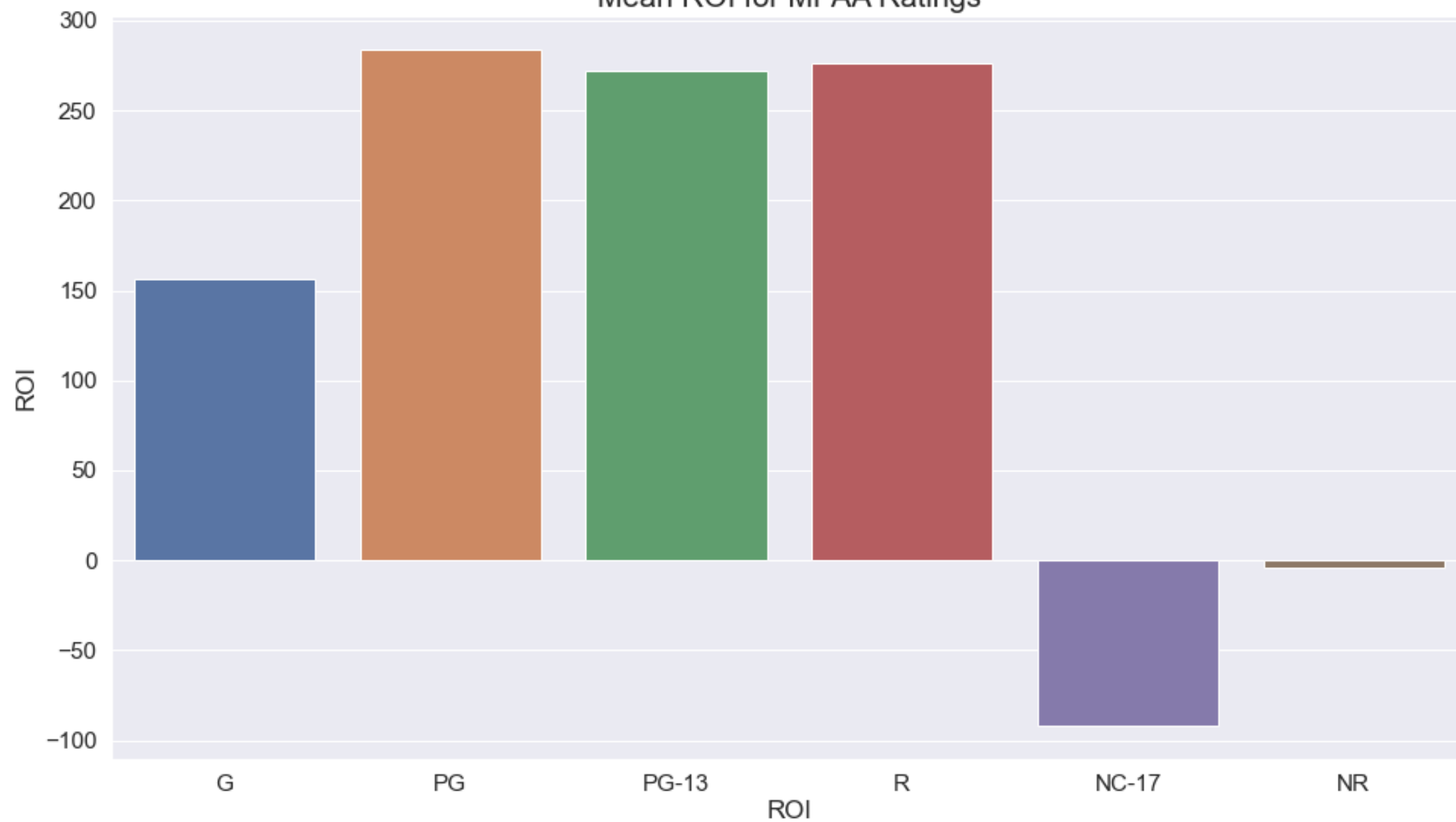
Movie Count Per MPAA Rating



Median ROI for MPAA Ratings



Mean ROI for MPAA Ratings



Conclusions

Budget and revenue are correlated, but do not spend frivolously

- Data represents studios with decades of experience
- Microsoft is new to the business, and should allocate budgets with discretion

Focus on Adventure, Animation, Family, Fantasy, and Science Fiction genres.

- Elements of action and comedy could be a bonus
- Horror, Music, Mystery, Romance, and Thriller are profitable, but only with lower budgets

Appeal to all ages to maximize profit potential

- PG and PG-13 ratings earn the highest ROI's
- R rated movies should be approached with more caution, NC-17 movies should be avoided entirely

Further Analysis

What are the commonalities in box office flops?

- Further explore successes and flops by isolating instances in separate dataframes

Who are the winners and losers in the most profitable genres?

- Investigate elements of strong and weak performers

Expand data to include multiple sources (e.g. Rotten Tomatoes)

- Combine TMDB data with data from Box Office Mojo, The Numbers, Rotten Tomatoes, and Metacritic
- Crystalize current dataset by ironing out financial discrepancies
- Seek trends in critic and audience popularity