



Flatiron Mod-1: Movie Analysis

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Agenda

- Guiding Questions
- Analytic Findings
- Summary & Recommendations
- Limitations & Next Steps

Guiding Questions

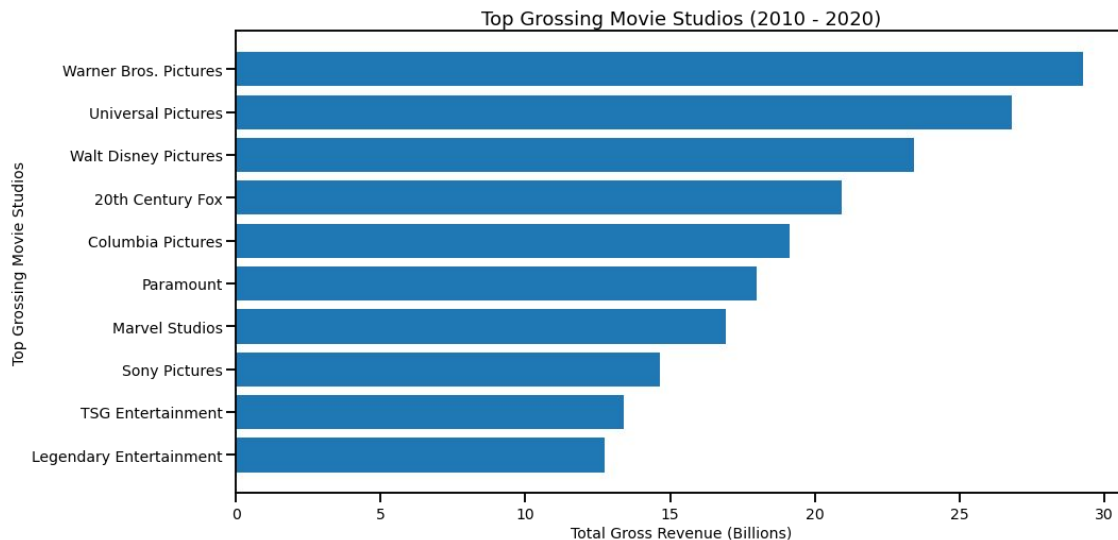
1. Which studios are the most successful along the lines of revenue, profitability and growth?
2. What are the most profitable genres and how have their profit potentials changed over time?
3. How might movie profitability be tied to economic conditions, specifically unemployment?



Studio Success

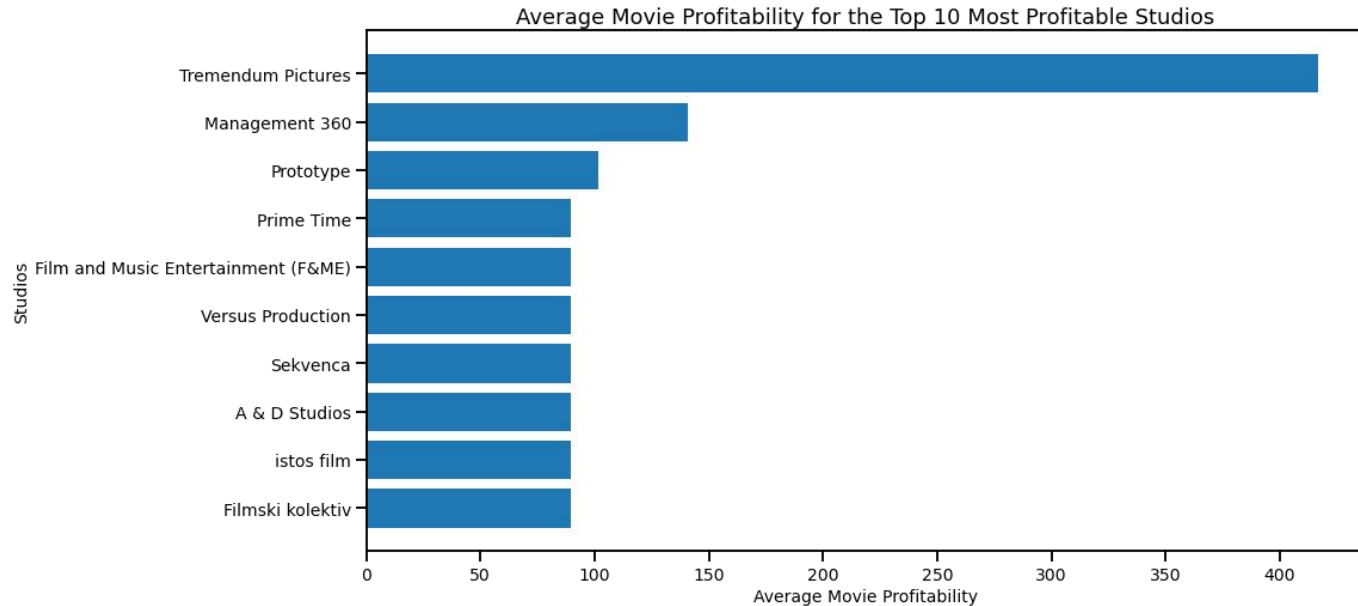


Warner Bros, Universal, and Disney lead the industry in gross revenue



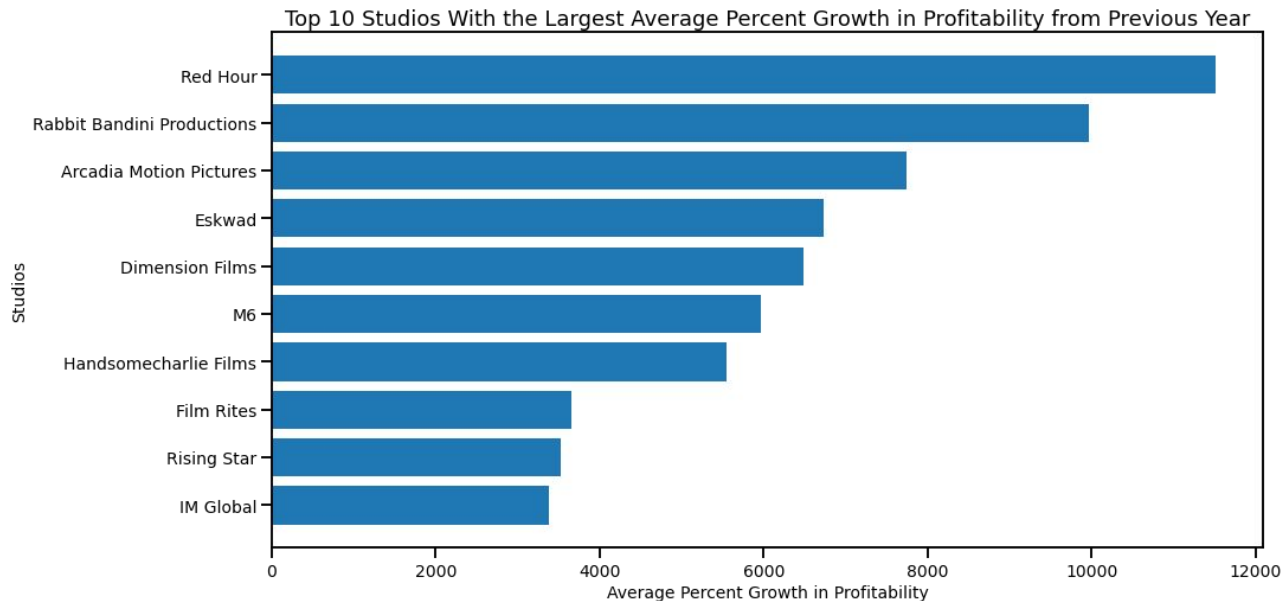
Sources: IMDb, TMDb API, The Numbers, & Box Office Mojo

However, smaller studios take the lead in average profitability



Sources: IMDb, TMDb API, The Numbers, & Box Office Mojo

Smaller studios also take the lead with average percent growth over time



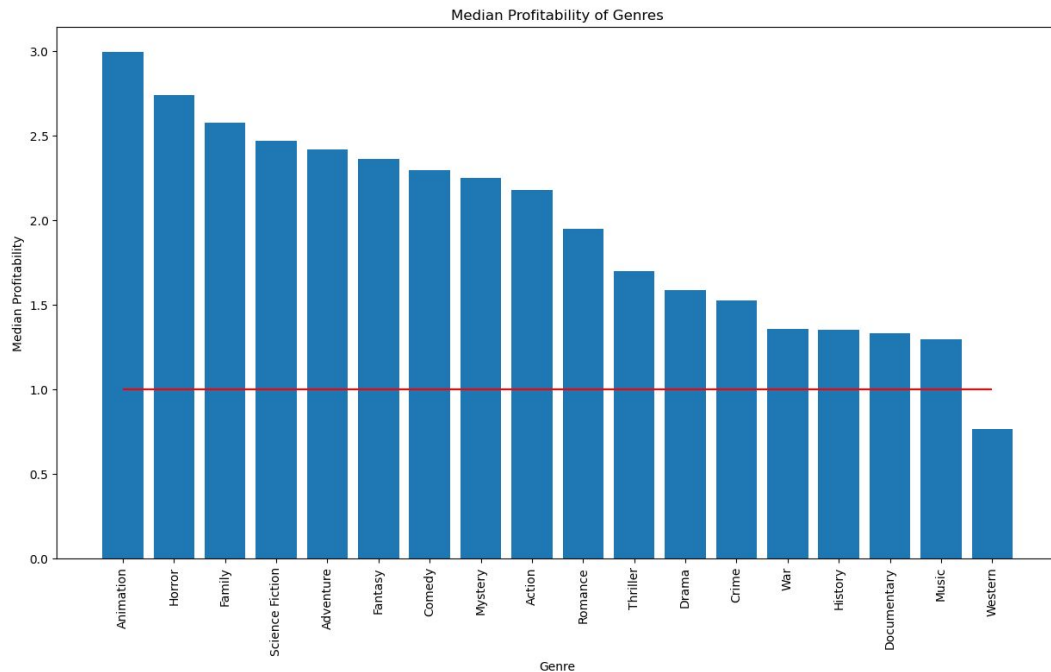
Sources: IMDb, TMDb API, The Numbers, & Box Office Mojo



Movie Genre & Profitability



Animation & horror movies top the list of most profitable genres



Sources: IMDb, TMDB API, The Numbers, & Box Office Mojo

Despite a local spike in profitability in 2018, most genres seem to trend downward in 2019

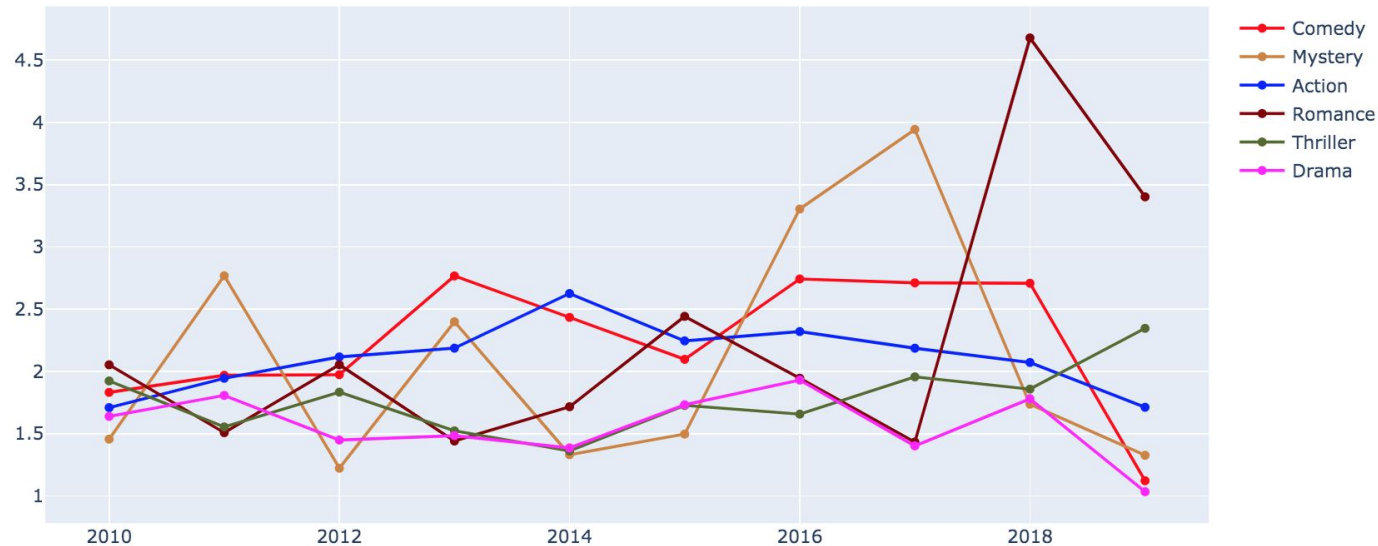
Change in Profitability Over Time for Top 6 Most Profitable Genres



Sources: IMDb, TMDb API, The Numbers, & Box Office Mojo

Despite a local spike in profitability in 2018, most genres seems to trend downward in 2019

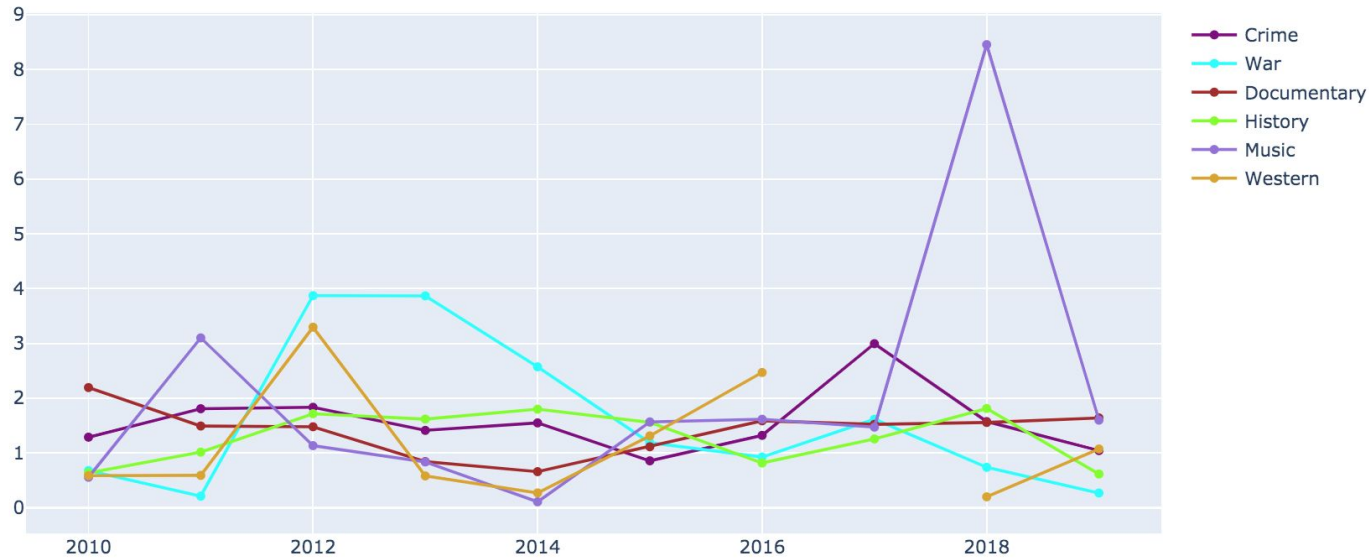
Change in Profitability Over Time for Middle 6 Profitable Genres



Sources: IMDb, TMDB API, The Numbers, & Box Office Mojo

Despite a local spike in profitability in 2018, most genres seems to trend downward in 2019

Change in Profitability Over Time for 6 Least Profitable Genres

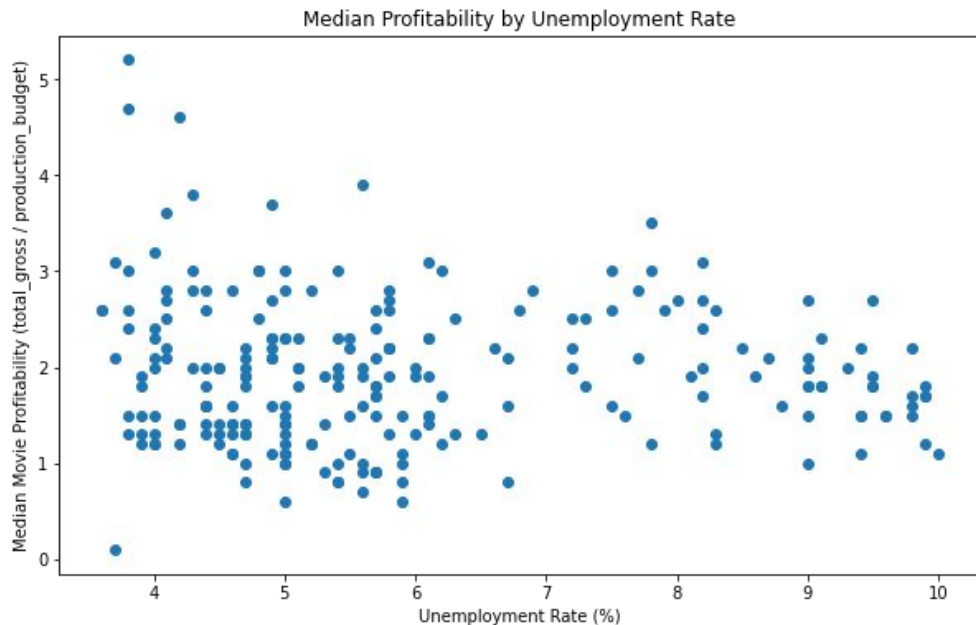




Unemployment Effects on Profitability



There seems to be a slight negative correlation between the unemployment rate and movie profitability



Sources: IMDb, TMDb API, The Numbers, Box Office Mojo, Unemployment data from <https://fred.stlouisfed.org/series/UNRATE>

Summary & Recommendations

Summary

1. Across genres, movie profitability seems to be trending downward which could be indicative of a larger downward trend in box office movies.
2. While larger studios like Disney and Universal top the charts in gross revenue, smaller studios seem to make more profitable movies by focusing on more profitable genres.
3. While we did not find a strong correlation between unemployment and movie profitability, the effects of COVID-19 and the related policies to prevent the spread of the virus are certainly going to impact movie profitability in an era when theaters are closed.

Recommendations

1. Prioritize producing movies that tend to be more profitable (i.e., animation, horror/thriller, and family movies).
2. Consider a smaller budget for an initial production.

Limitations & Next Steps

Limitations

- In cleaning our data, we ended up dropping many null values rather than alternative methods for imputation in light of the time constraints
- After disaggregating the data by year and genre, some years had very few entries for a given genre which could have led to unreliable conclusions

Next steps

- Find a much larger data set to work with to build out our:
 - Genre-Profitability Analysis
 - Unemployment-Profitability Analysis
- According to Business Insider, movie ticket sales have been decreasing with the rise of streaming service such as Netflix, Hulu, Amazon Prime Video
 - Gather data to compare profitability of streaming service productions against traditional box office productions

Thank you.



Appendix



Data Sources

- The Movie Database (TMDB) API
 - Movie genres
 - Studio names
- IMDb
 - Movie ratings
- Box Office Mojo
 - Gross revenue
- The Numbers
 - Gross revenue
 - Production budget
- National unemployment data from the Federal Reserve bank of St. Louis
 - <https://fred.stlouisfed.org/series/UNRATE>