
Module 1 - Final Project

Will Dougherty
Flatiron School - Data Science - Self-Paced

Project Goals

How do **Budget** and **Genre** influence the **profitability** of a **film production**?

- **Return on Investment** vs. **Net Revenue**
- **Worldwide** vs. **Domestic** contexts
- Over **Recent Years** (i.e. 2000-2020)

Question 1

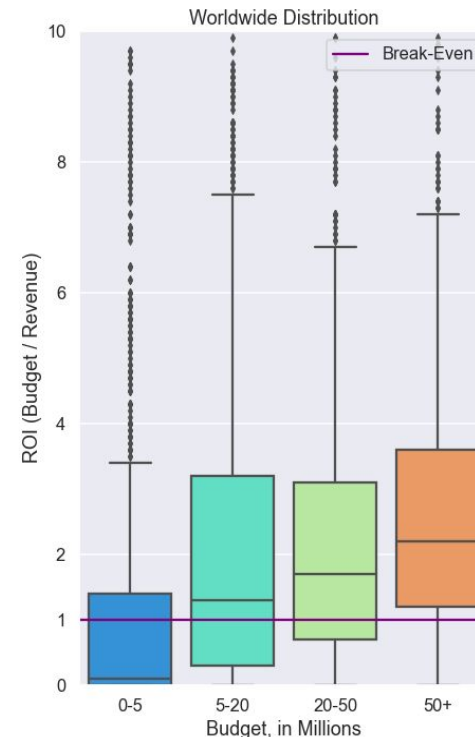
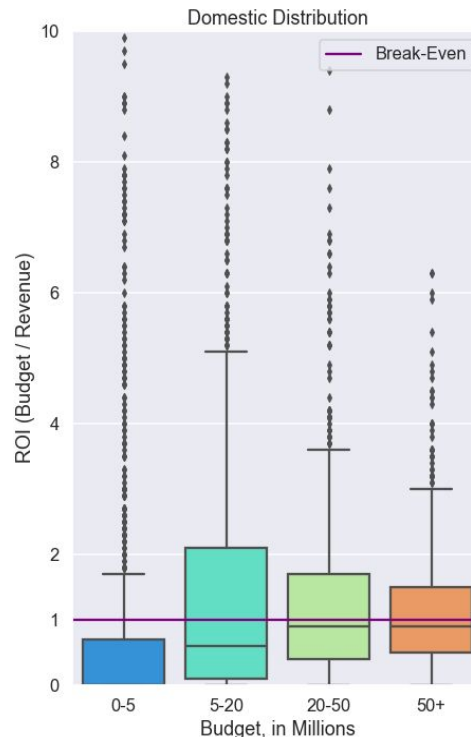
Films' budgets (from the-numbers.com) can be evenly split into categories of:

- \$0-5 Million
- \$5-20 Million
- \$20-50 Million
- \$50-Million

What are the distributions of their ROI (budget / revenue), for domestic and worldwide contexts?

- Domestic:
 - Most films are not profitable
- Worldwide:
 - \$5+ Million are mostly profitable
 - The more spent, the more made

Distribution of Films' ROI, 2000 - 2020



Data source: *the-numbers.com*

Question 2

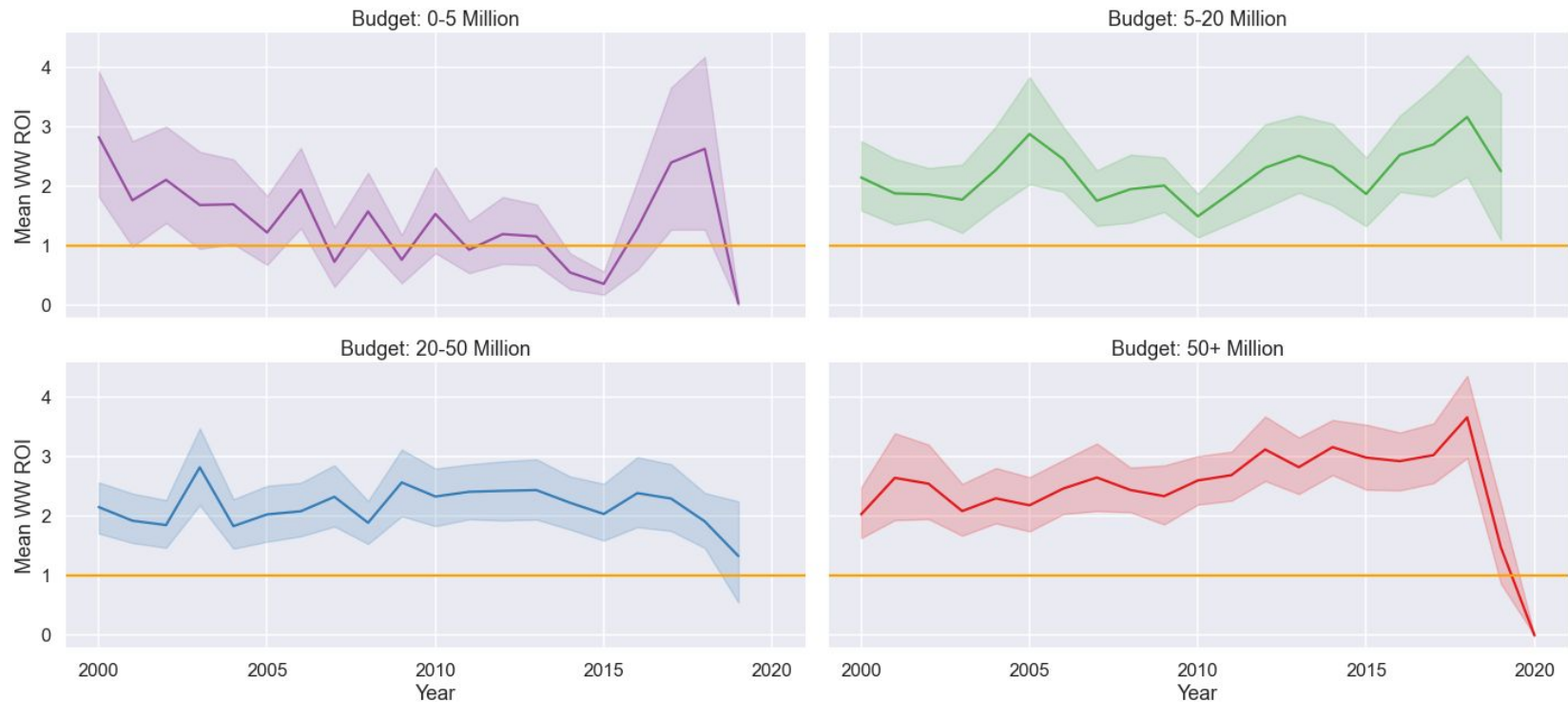
Are there any trends or clear winners in:

- Worldwide ROI
- Net Revenue

in the period from 2000-2020?

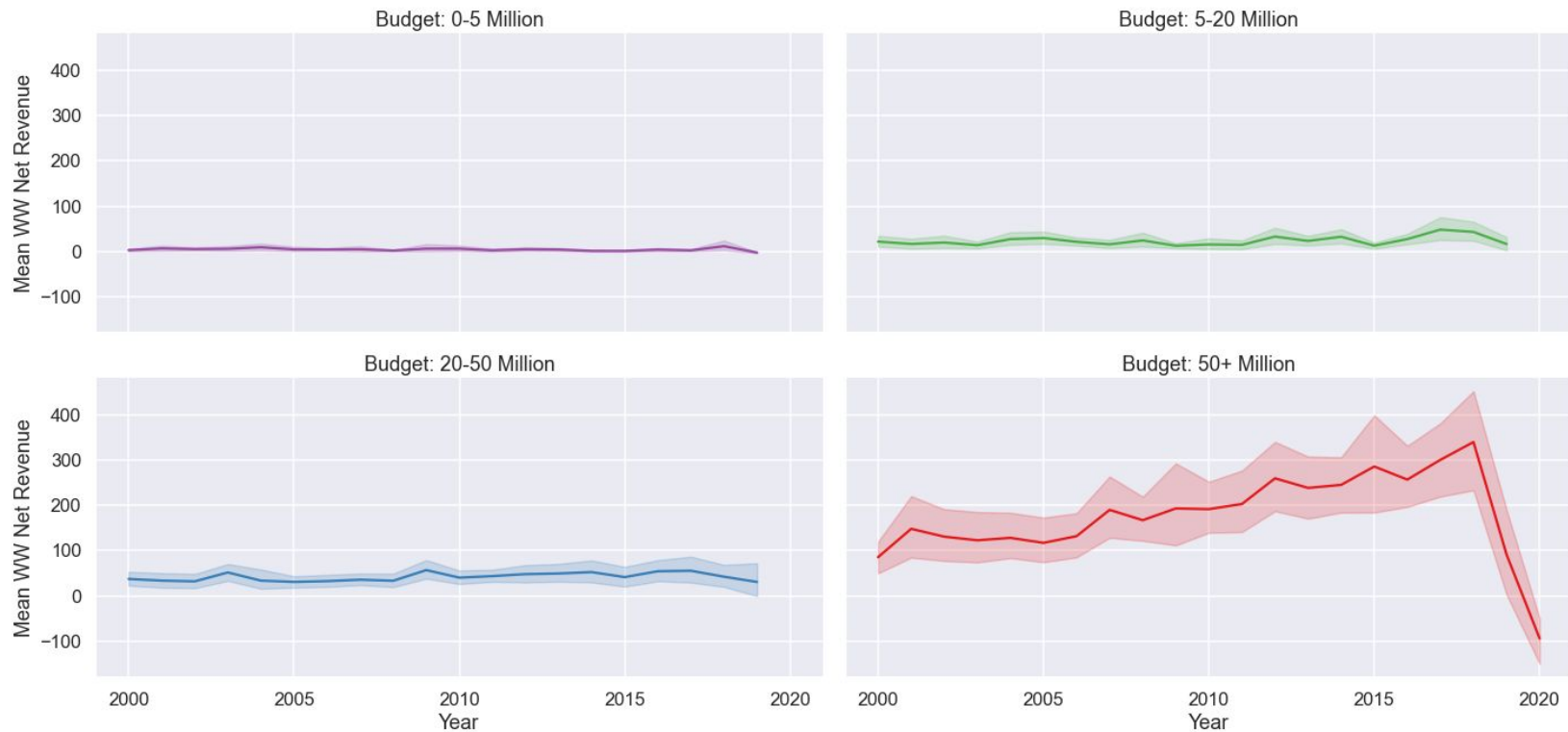
- Again, 5+ million seems to be most profitable.
- There is a big drop just before 2020, most likely because of the pandemic
- The top 3 categories are all roughly equivalent in ROI: what about Net Revenue?

Mean Worldwide ROI for Films 2000-2020, by Budget Category
Orange line = Break-Even



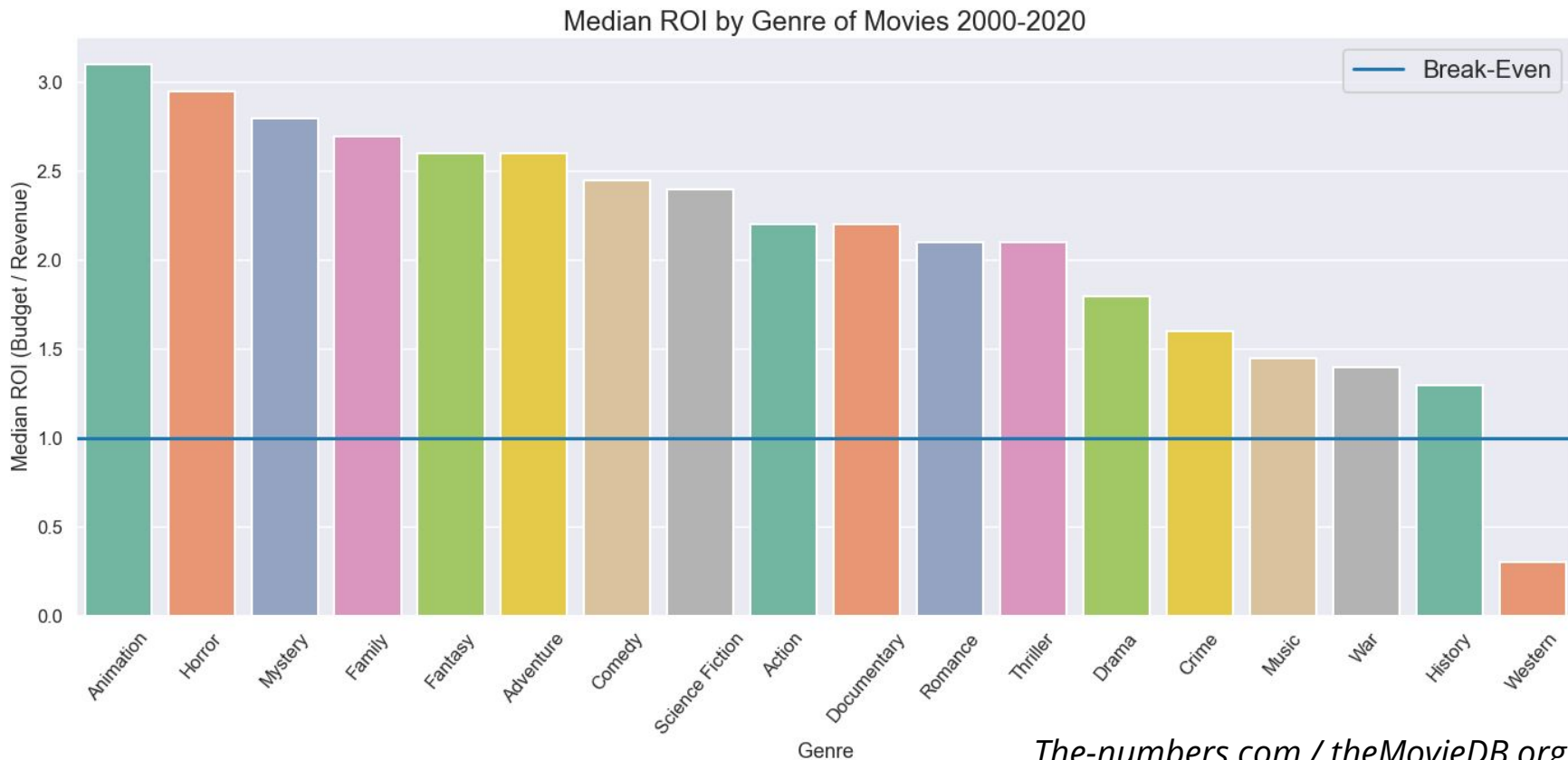
- In Net Revenue, the bottom 3 categories have low raw profitability
- The top category is vastly higher - again, excepting the large drop just before 2020

Mean Worldwide Net Revenue for Films 2000-2020, by Budget Category



Question 3

What film genres have the highest median Worldwide ROI?



The-numbers.com / theMovieDB.org

Question 4

We saw that:

- Animation, Horror, Mystery, Family, Fantasy, and Adventure are the top genres.

Are there any trends in these genres from 2010-2018?

Median ROI by Film Genre, 2010-2018



Some are consistent and others are more volatile, but almost all genres stay well north of 'break-even' over this period.

Horror and Mystery are most volatile - they have high peaks, but low valleys.

Conclusions

Recommendations based on findings:

- It's very clear that **worldwide** profitability should be prioritized, as most domestic ROI's are below 1.0 (break-even).
- A threshold of **\$5 million dollars** is the point at which **worldwide ROI** is above the break-even point; and the **more money invested, the more of a return** is generated.
- We saw that the highest category (**\$50 million plus**) is a **clear winner** in terms of **net revenue** over the period 2000-2020, and it is the only with a clear **upward trend**.
- The lowest category, **\$0-5 Million**, is the **clear loser** in both measures - or at least, it has **low risk**, but **low reward**.
- In terms of **genre**, questions 3 and 4 show that **most genres** have at least **some profitability potential**.
- **Westerns** are the **clear losers** here, and **History, War, and Music** films aren't much better.
- When looking at the **top genres**, **Animation, Horror, Mystery**, etc are **most profitable**, but some (Horror, Mystery) can be more **volatile** over time.