Movie Industry Trends

Data by IMDB

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Objective

- After a series of Box Office flops we have an urgent need to better understand our industry

- Graphics and analysis were done using Python with code and run instructions available here

Executive Summary

- **Franchises aren't immune** - they have falling profit as well
- **People like TV shows** more than movies on IMDB
- **Bet on Directors** - lightning can strike twice
- **Tears and Laughs** - Drama and Comedy play well with the international market
- **War Never Changes** - War and History are on average well reviewed and profitable (especially in the US and UK)

AGENDA

Data

Using a sample of 4,804 **movies** or about **1%** of the total Movies on IMDB (source) from between 1916 and 2016 **– IMDB Stats here**

Issues

- IMDB doesn't just rank Movies but **also TV shows**
- No primary_key had to make one to uniquely identify data, **there was unnecessary duplicates**
- No clarity on why some data was missing, **need to investigate data pipeline**
- Potential Sampling Bias as people fondly remember movies prior to Digital Age

## Opportunities

- **Data to segment streaming,** hard to understand changing consumer behaviors otherwise

- **Invest in Data** Model could include sources of variation like Demographics, Economic data, and Online Behaviour Which could be controlled for with some more investment.

- **Explore New Technology** New and Improved Gen AI offer great Text Generation which could infer Genres not thought of before (Netflix Famous for this) - would require investment

Market Trend - Median Ratings Down

There has never been as many movies, but doesn't mean people are Happy

Median Movie Score by Decade
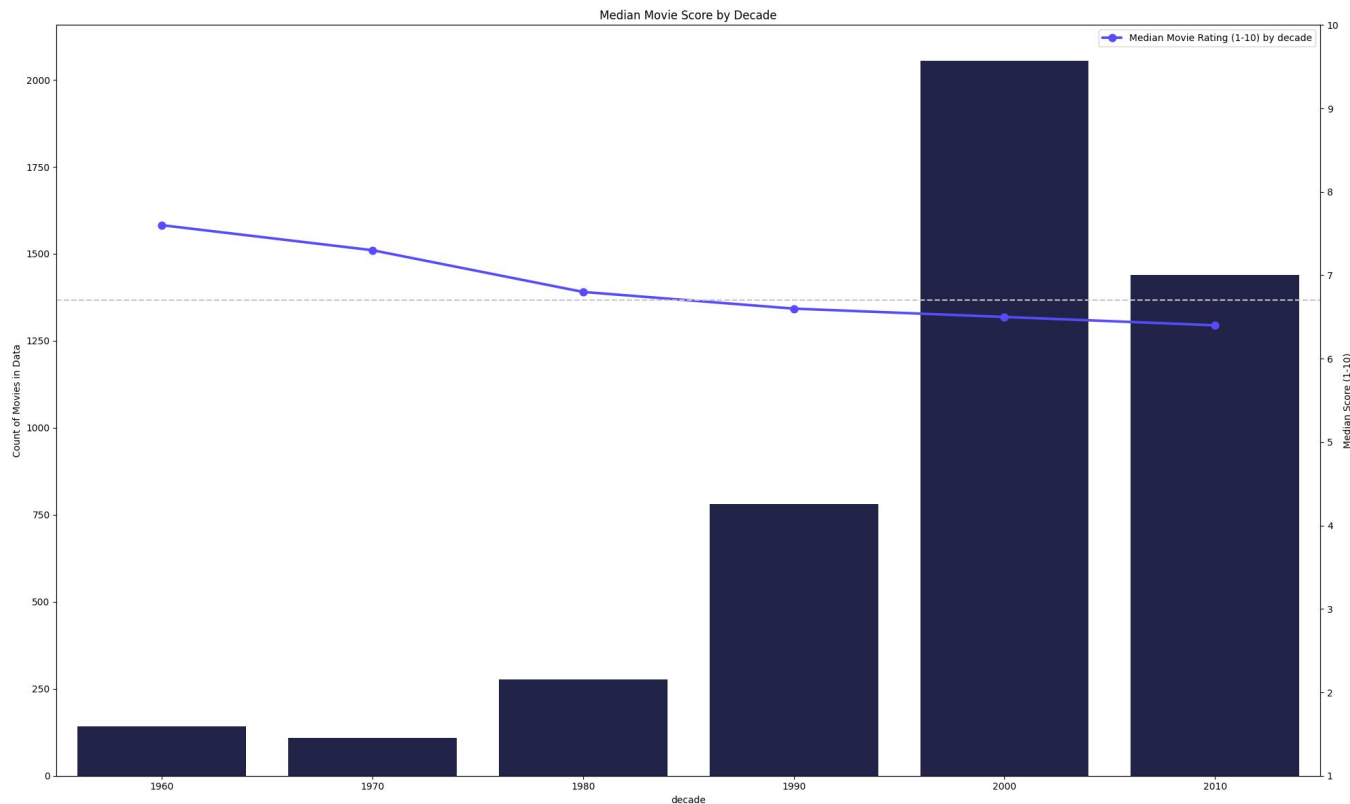
The Median Movie Score as rated by the Audience is falling and has been for some time

The Digital Age has has seen an explosion of movies being made and reviewed

Market Trend - Falling Returns

As more Movies are getting made their returns are also Falling

Median Movie Profit (lift) by Decade
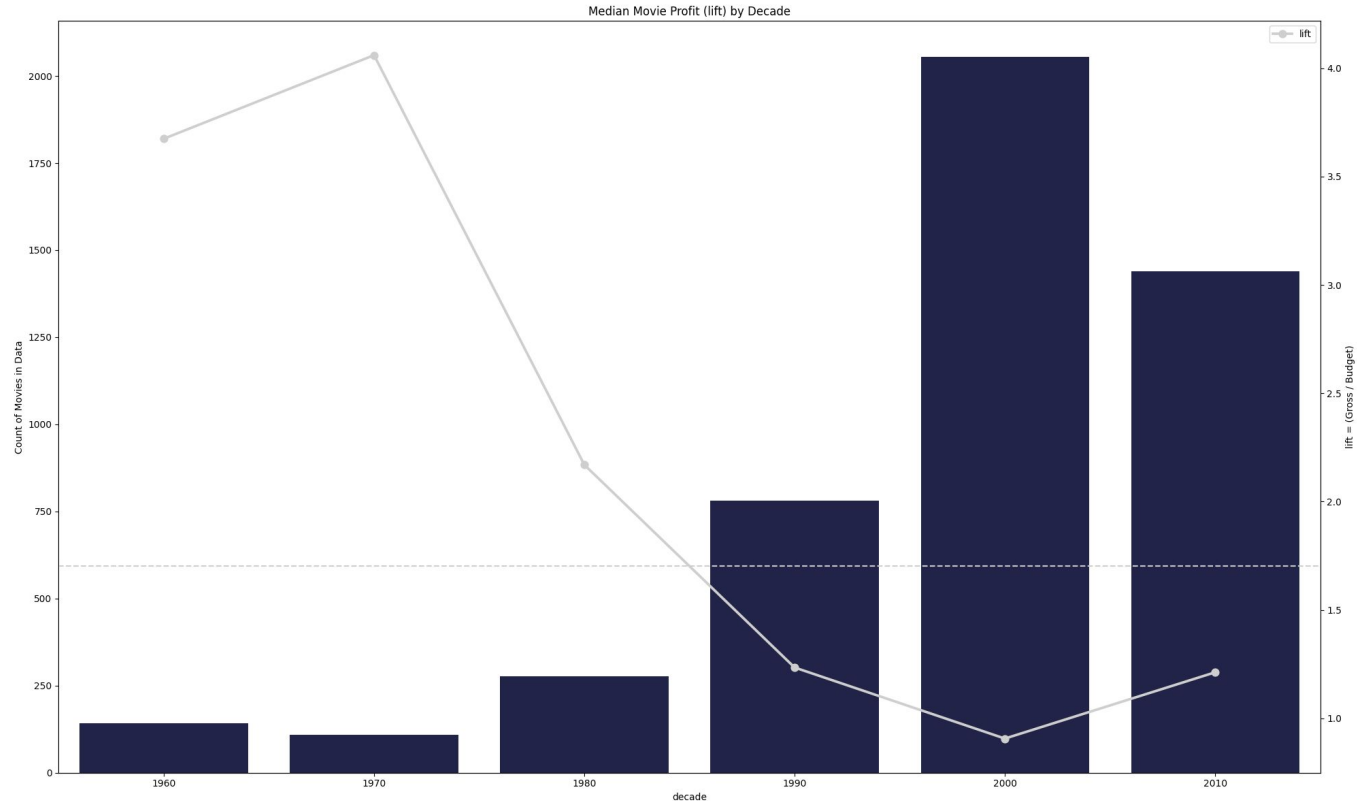
Profitability has also been falling. Across the board its a tough industry for everyone as money tries to find a return

* Ideally want a Lift Ratio of about 2-3x as that would recoup Marketing and Promotional losses.

Market Trend - TV vs Movies

More people are rating the TV shows higher
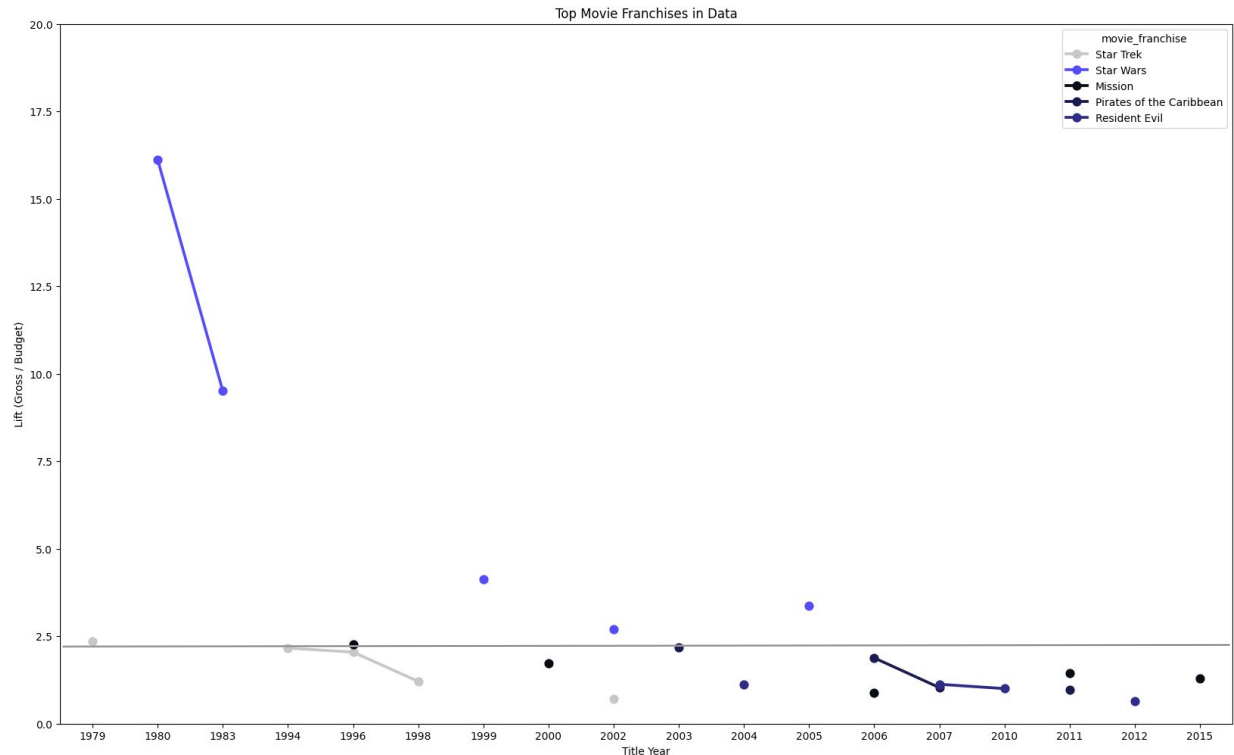

Movie vs TV by Median Scores
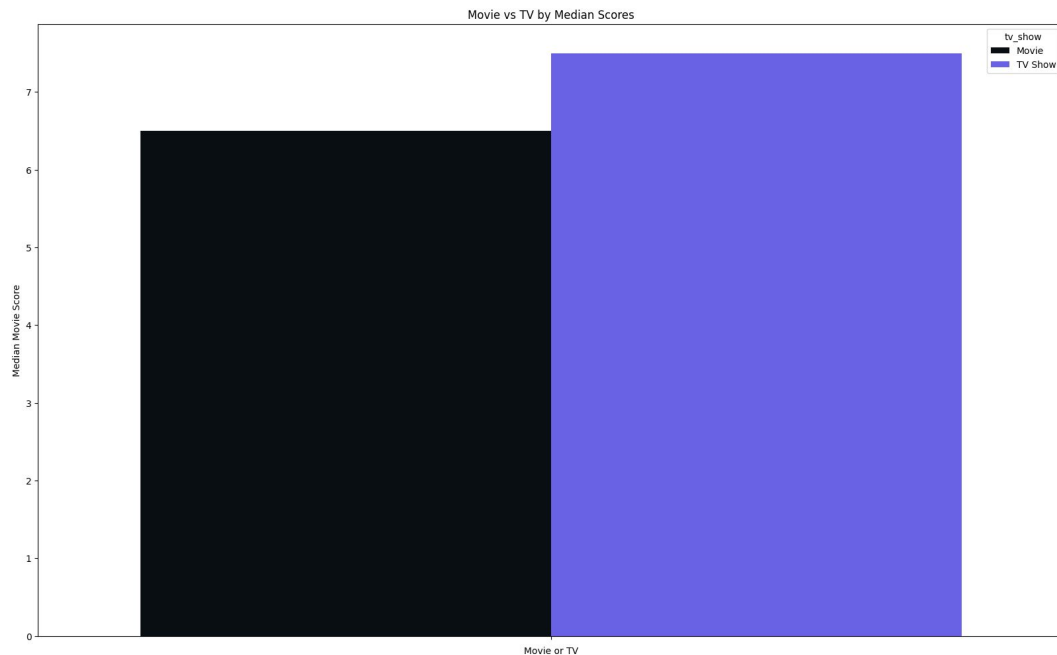
TV Shows have a higher median rating

Limited data on TV shows but it's clear people are really down on Movies

Market Trend - Falling Returns - Franchises

Even across well known franchises movies are getting less profitable

Top Movie Franchises in Data

Profitability has also been falling even in the Top Franchises.

They are just getting so expensive to build they are getting under the ROI range where the investment pays out

What goes into a Hit Movie

What characterises a (5x) Movie?

Is a Breakout Hit (5x)	yes	no
Count (n)	358	4,446
Median movie score	7	6
avg users voted	76,835	31,273
Median facebook likes	2,442	3,173
Median director likes	113	79
Median actor1 likes	893	1,000
Median actor2 likes	504	616
Median actor3 likes	300	385
Median duration	102	104
Median title year	1,998	2,006
Number of users voted	53,494,078	349,599,327
Median gross	$50,960,470	$22,726,122
median_budget	$5,000,000	$20,000,000

These hits are about 7% of all movies

Example Breakout movies are The Lion King, Garden State, Jackass: The Movie, Boyz n the Hood

Characterized by

- higher movie scores
- an exponential number of users voting online for them,
- higher Director Facebook likes (despite being on average before facebook)

What goes into a Hit Movie

Exploring the Directors a big

Is it a Breakout Hit? (5x)	no	yes
Count (n)	4,446	358
Director more than twice	3,013	273
Average Directing Year	2,003	1,994
Median Lift	0.94	8.80
(%) of Directors more than Twice	67.77%	76.26%

Higher percent of directors in the breakout group have been there twice

The lift is higher and if they've been there they can again just not always with the same Franchise
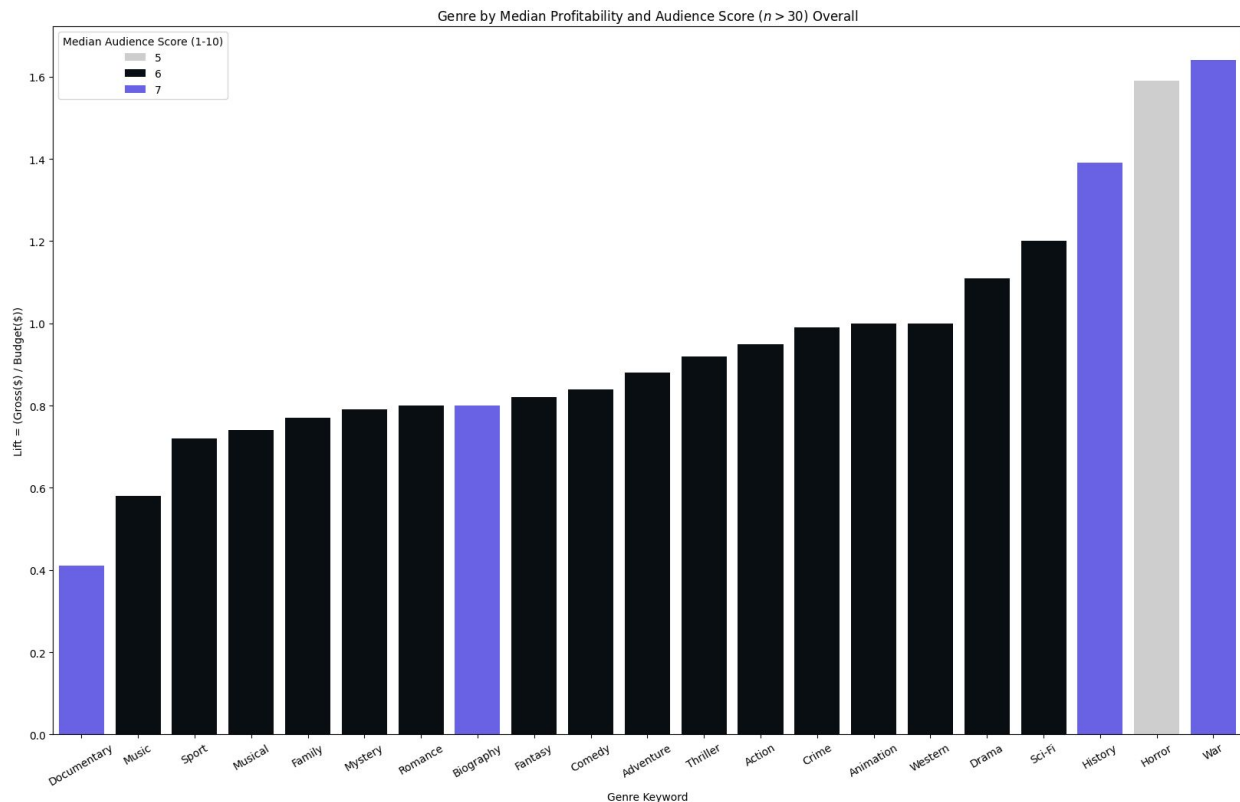
The difference between the proportion of Directors having a hit twice is Statistically Significant * see notebook

Think

- Ang Lee
- Alfred Hitchcock
- Steven Spielberg

Exploring Genres - Overall

Not all Genres are created Equal

Genre by Median Profitability and Audience Score (*n* > 30) Overall

No genre gives an expectation of profit or rave reviews but some have a higher expected value.
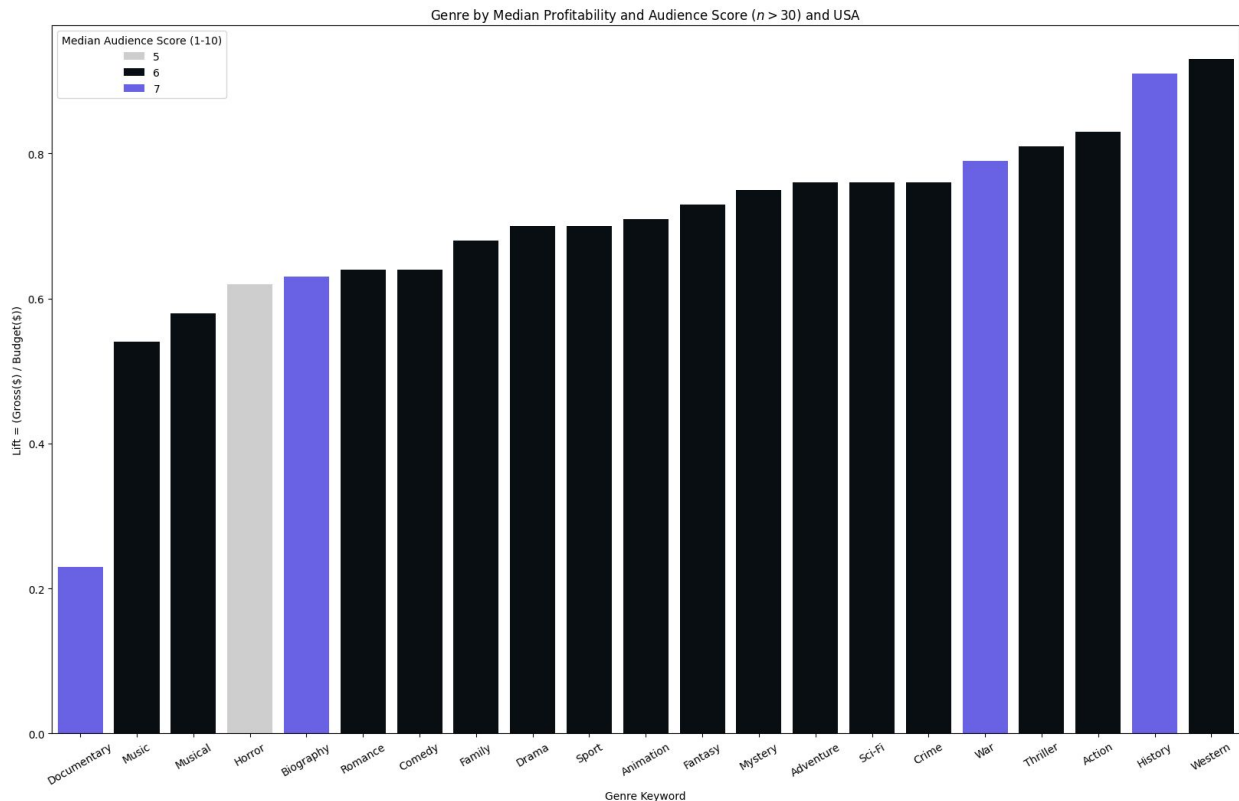
Overall War and History Movies seem to be at the intersection of highly rated and profitable

There is considerable Variability in Genres in both Profitability and Audience Reviews.

Exploring Genres - USA Only

Not all Genres are created Equal

Genre by Median Profitability and Audience Score (*n* > 30) and USA

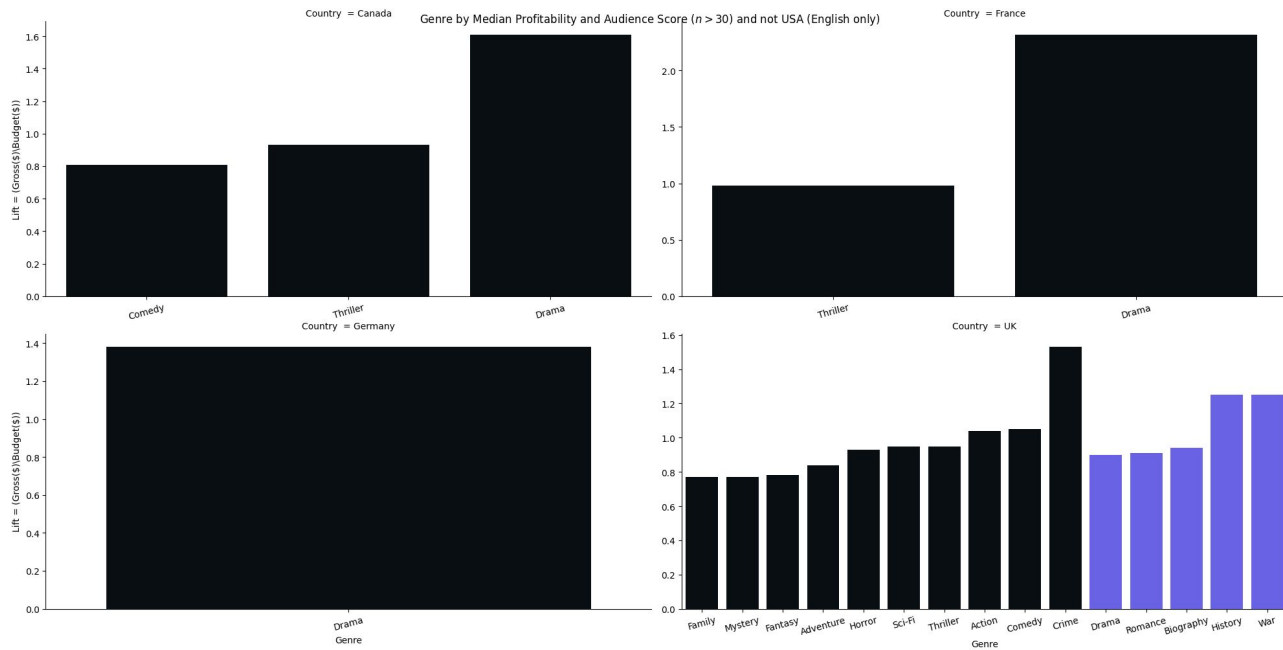No genre gives an expectation of profit or rave reviews but some have a higher expected value.

Expected Profit is even lower in the US than in other places

Continue to see War and History trends

Exploring Genres - Non US - English only

Not all Genres are created Equal

Genre by Median Profitability and Audience Score ($n > 30$) and not USA (English only)

Dramas play well in **Canada, France, and Germany**

In the UK **Crime, History, and War all play well**

Conclusions

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Need to act now! More research is also needed

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Questions?

Appendix

Top 5 (*n*) Genre trends and how they moved since the 1970s (Overall)