Data Visualization Report
Exploring Trends in Domestic Revenue and Ratings Across Top 25 Movies (2020–2024)

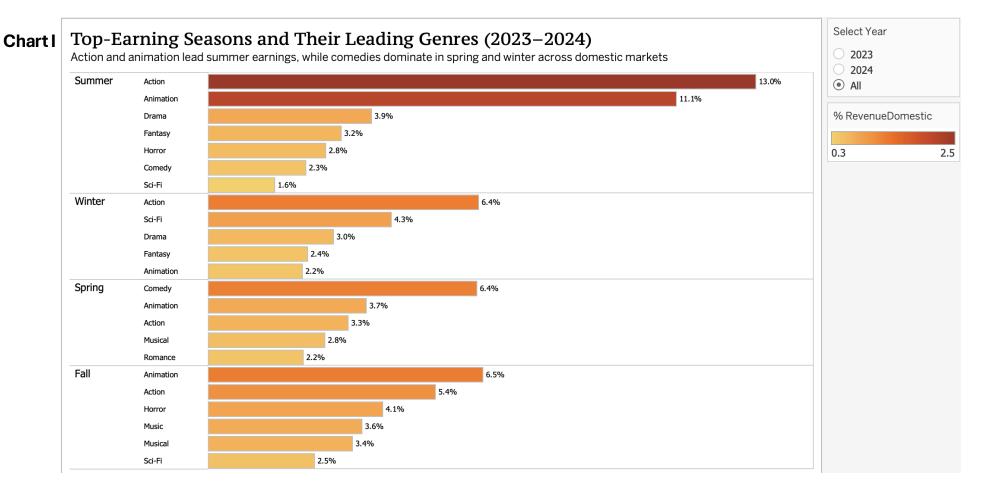**Rasheed Afolabi**
April 2025
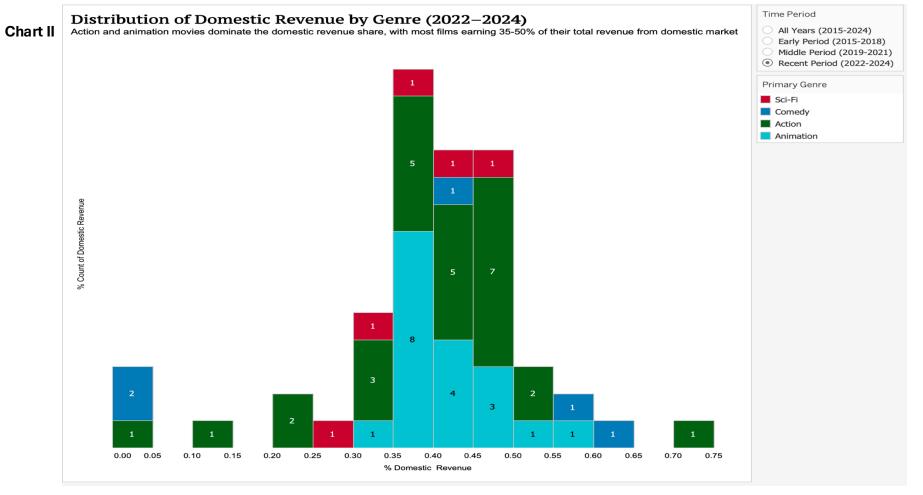
Content

Introduction

Primary Focus:

What drives a movie's success at the domestic box office? This project explores the intersection of three key elements: genre, seasonal timing, and audience ratings to uncover patterns behind top-performing films between 2020 and 2024.

Using data from the top 25 movies, the visualizations examine how certain genres dominate during specific seasons, how audience sentiment (measured through IMDb ratings) aligns with revenue performance, and which titles contribute most to their category's financial success.
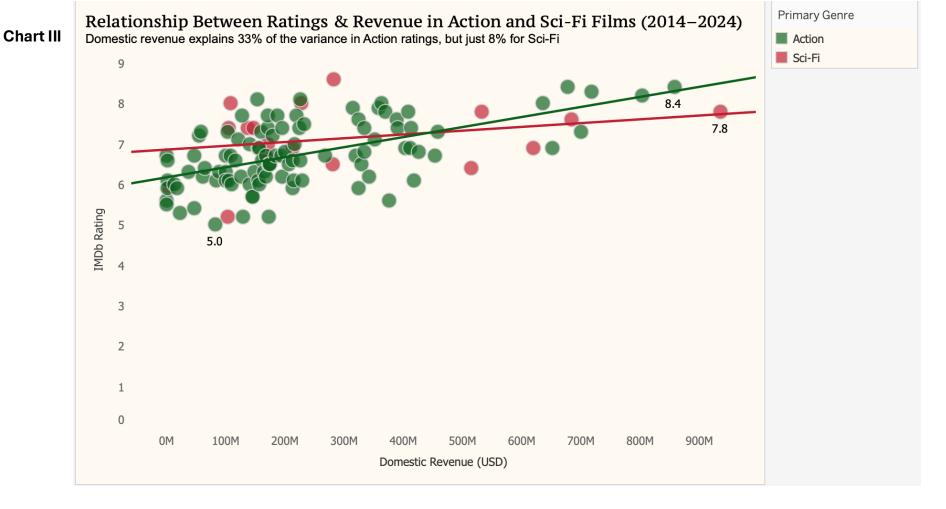
While action and animation consistently lead to summer earnings, comedies tend to perform better in spring and winter. Interestingly, strong ratings don't always guarantee strong revenue, and a few standout films challenge the assumption that critical reception and commercial success always go hand in hand.

Chart I | **Top-Earning Seasons and Their Leading Genres (2023–2024)**
Action and animation lead summer earnings, while comedies dominate in spring and winter across domestic markets

Summer
Genre	%
Action	13.0%
Animation	11.1%
Drama	3.9%
Fantasy	3.2%
Horror	2.8%
Comedy	2.3%
Sci-Fi	1.6%

Winter
Genre	%
Action	6.4%
Sci-Fi	4.3%
Drama	3.0%
Fantasy	2.4%
Animation	2.2%

Spring
Genre	%
Comedy	6.4%
Animation	3.7%
Action	3.3%
Musical	2.8%
Romance	2.2%

Fall
Genre	%
Animation	6.5%
Action	5.4%
Horror	4.1%
Music	3.6%
Musical	3.4%
Sci-Fi	2.5%

- This parameter enables the user to filter the view by year, helping to uncover short-term shifts in genre success and better compare yearly box office performance by season.

- Summer releases saw the strongest domestic performance, especially from Action and Animation titles, reflecting their dominance in the blockbuster season.

- Spring and Winter favored Comedy, highlighting a seasonal appetite for light-hearted, family-friendly content during school breaks and holidays.

- Fall delivered a genre mix, with high-performing entries in Horror, Musical, and Music, making it a more experimental revenue period.

- Sci-fi ranked lowest across all seasons, suggesting these films may appeal more to global markets or streaming audiences than domestic theaters.

Chart II

Distribution of Domestic Revenue by Genre (2022−2024)
Action and animation movies dominate the domestic revenue share, with most films earning 35-50% of their total revenue from domestic market

Time Period
- ○ All Years (2015-2024)
- ○ Early Period (2015-2018)
- ○ Middle Period (2019-2021)
- ⦿ Recent Period (2022-2024)

Primary Genre
- ■ Sci-Fi
- ■ Comedy
- ■ Action
- ■ Animation
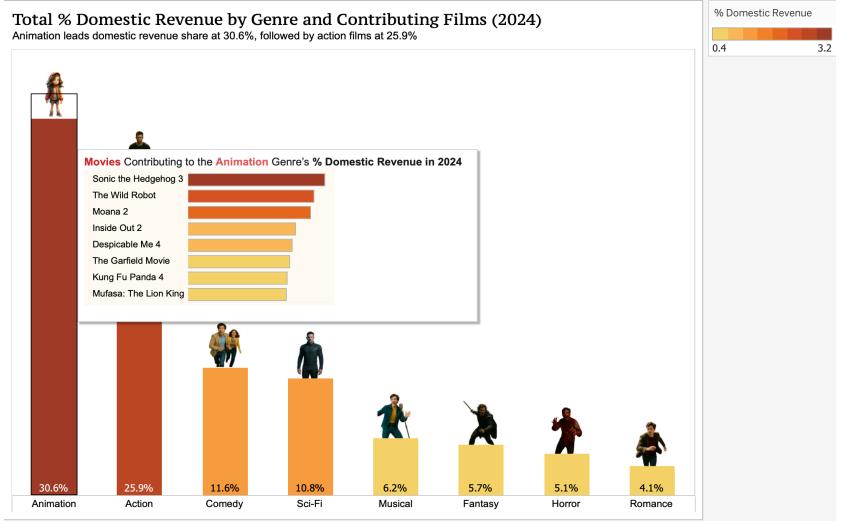
% Count of Domestic Revenue

% Domestic Revenue

- The parameter lets the user choose which time period to analyze (All Years, Early Period, Middle Period, or Recent Period), allowing for comparison of domestic revenue distribution patterns across different timeframes of the 2015-2024 dataset.

- The distribution of domestic revenue percentage is **slightly right-skewed,** with most films earning between 35% and 50% of their total revenue from domestic markets, regardless of genre.

- Action films have the strongest presence across the distribution, appearing in nearly every percentage bin and dominating the 45-50% range, suggesting balanced appeal in domestic and international markets.

- Animation films cluster primarily in the 35-45% domestic revenue range, indicating these films typically generate a larger portion of their revenue from international audiences.

- Comedy films show more variation in their domestic revenue percentages, appearing at the lower (0-5%) and higher (60-65%) ends of the distribution, suggesting inconsistent international market performance compared to other genres.

Chart III

Relationship Between Ratings & Revenue in Action and Sci-Fi Films (2014–2024)
Domestic revenue explains 33% of the variance in Action ratings, but just 8% for Sci-Fi
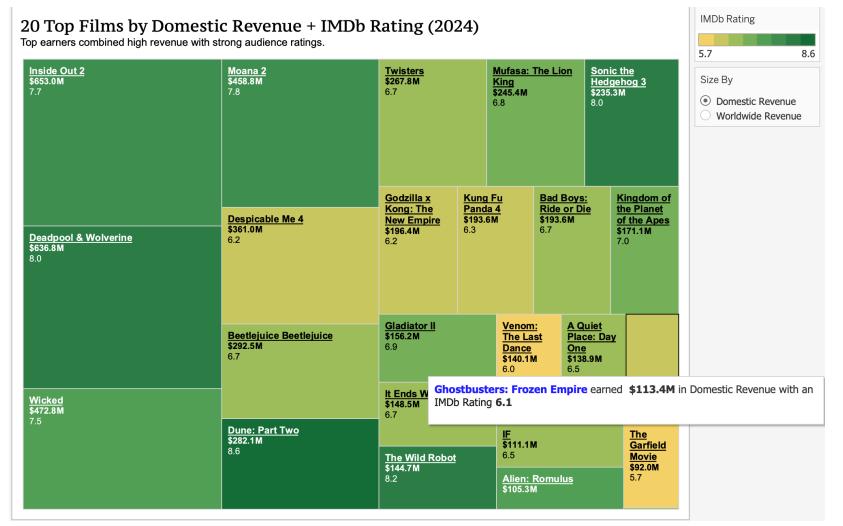
- This scatterplot explores whether there is a meaningful connection between IMDb rating and domestic box office performance across Action and Sci-Fi films from 2014 to 2024.

- Action films reveal a moderate positive relationship, with an R-squared value of 0.33 and a statistically significant p-value (< 0.0001), suggesting that higher revenue corresponds with higher ratings.

- Sci-fi films, in contrast, show a much weaker correlation (R^2 = 0.08) and a non-significant p-value (0.27033), indicating minimal predictive power between revenue and rating in that genre.

- The average IMDb rating for high-revenue action films is noticeably higher (8.4) than that of top-earning Sci-Fi films (7.8), further reinforcing this pattern.

- The flat trend line for Sci-Fi implies that, unlike in action films, even strong box office returns in the genre don't consistently align with strong audience approval.

Chart IV

Total % Domestic Revenue by Genre and Contributing Films (2024)

Animation leads domestic revenue share at 30.6%, followed by action films at 25.9%

% Domestic Revenue

0.4   3.2

Movies Contributing to the **Animation** Genre's **% Domestic Revenue in 2024**

| Sonic the Hedgehog 3 |
| The Wild Robot |
| Moana 2 |
| Inside Out 2 |
| Despicable Me 4 |
| The Garfield Movie |
| Kung Fu Panda 4 |
| Mufasa: The Lion King |

| 30.6% | 25.9% | 11.6% | 10.8% | 6.2% | 5.7% | 5.1% | 4.1% |
| Animation | Action | Comedy | Sci-Fi | Musical | Fantasy | Horror | Romance |

- Animation leads all genres, contributing 30.6% of total domestic revenue, with standout titles like *Sonic the Hedgehog 3* and *Inside Out 2*.

- Action ranks second at 25.9%, but unlike the multiple top-performing animation titles, its performance relied heavily on a single film (Twisters).

- Comedy and Sci-Fi show mid-tier performance, contributing 11.6% and 10.8%, respectively, but lacked dominant blockbuster titles.

- Musicals, Fantasy, Horror, and Romance each earned less than 7%, indicating lower box office strength or fewer high-impact releases in 2024.

Chart v

20 Top Films by Domestic Revenue + IMDb Rating (2024)
Top earners combined high revenue with strong audience ratings.

IMDb Rating

5.7 — 8.6

Size By
- ◉ Domestic Revenue
- ○ Worldwide Revenue

Inside Out 2
$653.0M
7.7

Moana 2
$458.8M
7.8

Twisters
$267.8M
6.7

Mufasa: The Lion King
$245.4M
6.8

Sonic the Hedgehog 3
$235.3M
8.0

Deadpool & Wolverine
$636.8M
8.0

Despicable Me 4
$361.0M
6.2

Godzilla x Kong: The New Empire
$196.4M
6.2

Kung Fu Panda 4
$193.6M
6.3

Bad Boys: Ride or Die
$193.6M
6.7

Kingdom of the Planet of the Apes
$171.1M
7.0

Beetlejuice Beetlejuice
$292.5M
6.7

Gladiator II
$156.2M
6.9

Venom: The Last Dance
$140.1M
6.0

A Quiet Place: Day One
$138.9M
6.5

Wicked
$472.8M
7.5

It Ends W
$148.5M
6.7

Ghostbusters: Frozen Empire earned **$113.4M** in Domestic Revenue with an IMDb Rating **6.1**

Dune: Part Two
$282.1M
8.6

IF
$111.1M
6.5

The Garfield Movie
$92.0M
5.7

The Wild Robot
$144.7M
8.2

Alien: Romulus
$105.3M

- The chart uses a parameter that allows toggling between domestic and worldwide revenue, which adjusts the size of each film's tile based on the selected metric. This enhances comparative analysis depending on the market focus.

- *Inside Out 2* led all films in domestic revenue with $653 million and held a strong IMDb rating of 7.7, demonstrating both commercial and critical success.

- *Dune: Part Two* had the highest IMDb rating at 8.6, even though it ranked only sixth in terms of domestic revenue, showing that critical acclaim doesn't always align with box office dominance.

- Several high-earning films such as *Despicable Me 4* and *Godzilla x Kong* earned over $190 million domestically but received lower IMDb ratings between 6.2 and 6.3, indicating weaker audience reception.

- Only a few titles, including *Deadpool & Wolverine* and *Sonic the Hedgehog 3*, achieved both high revenue and high IMDb ratings (8.0 or above), suggesting a rare balance of commercial appeal and viewer satisfaction.