

November 08, 2018.

### Project 3 : Visualizing Movie Data

- **Question 1:** How have movie genres changed over time?

The first timeline graph shows the changes of the Popularity by genres movies. The top 3 movie genres are Action, Drama, and Comedy, they have had sustained growth, follow by Adventure, Animation, and Thriller with unstable growth. The second timeline graph displays the Revenue variation along the time. Action genre is the only with sustains growth > \$ 10 B. Adventure, Comedy, and Drama have unstable growth. The rest of the genres with < 2 billion of Revenue, except Science Fiction \$2,781 B in 2012 and Fantasy \$ 2,091 B in 2007.

Second graph shows the differences between Average Revenue and Average Popularity. Since 1977 the average Revenue has been growing as depicts the linewidth, being higher between 1995-2004. As well the average Popularity has been climbing.

[https://public.tableau.com/views/Q1GenremoviesYearvs\\_RevenuePopularity/Dashboard2?:embed=y&:display\\_count=yes&publish=yes](https://public.tableau.com/views/Q1GenremoviesYearvs_RevenuePopularity/Dashboard2?:embed=y&:display_count=yes&publish=yes)

- **Question 2:** How do the attributes differ between Universal Pictures and Paramount Pictures?

First slide, the brief tables shows the Universal Pictures<sup>1</sup> attributes are higher than Paramount Pictures<sup>2</sup>. First, the Budget difference between them is around 11%, and the Revenue is slighter higher 14%. As well, for UP the contrasts about Vote avg and Popularity are big, 17% and 18%, respectively. Finally, UP has longer films than PP, a variation of 18%.

Second slide includes a bar graph about the differences between Popularity, Revenue, and Runtime by companies. UP has the highest values.

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<sup>1</sup> Abbreviation: Universal Pictures - UP

<sup>2</sup> Abbreviation: Paramount Pictures - PP

Third slide shows a bar graph that combines the revenue and budget by PP and UP. Clearly, UP has more budget and revenue than PP. A point of comparison is the huge profit margin of both companies by each movie.

Fourth slide, UP since 2012 the revenue has been growing between \$2.9 and 3.9 B; contrary for PP the significant revenue was > \$3 B at 2011.

Last slide depicts the Differences by genres movies from Number of records, Budget, and Companies. UP and PP top 4 genres with the highest budgets are Action, Comedy, Adventure, and Drama.

[https://public.tableau.com/views/Q2Story-PPUP/Q2Story?:embed=y&:display\\_count=yes&publish=yes](https://public.tableau.com/views/Q2Story-PPUP/Q2Story?:embed=y&:display_count=yes&publish=yes)

- **Question 3:** How have movies based on novels performed relative to movies not based on novels?

Measure values vs. Popularity visualization: We choose Popularity as the dependent variable to clarify the difference pointed on question 1, due to the graph displayed a disruptive growth between Revenue and Popularity.

The multiple scatter plots' slopes have a positive direction and all p-values are < 0.0001 thus are extremely significant because the Popularity has a strong relationship between the attributes. The circle sign represents the non-novels, with a large dispersion and the grading of the slope going to X-axis. Conversely, the square sign depicts the novels having less dispersion and the slope going to Y-axis. Deep blue color shows the most popular movies and with more dispersion > 20 points.

Release Year vs. Revenue graph: Along the time the Non-novel movie's revenue has had a progressive growth, opposed to the Novel movie's revenue, it has had a nonconstant growth.

[https://public.tableau.com/views/Q3\\_NovelNonnovelmovies\\_Reviewed/Dashboard1?:embed=y&:display\\_count=yes](https://public.tableau.com/views/Q3_NovelNonnovelmovies_Reviewed/Dashboard1?:embed=y&:display_count=yes)

- **Question 4:** How do the revenue and popularity differ between Directors?

The dot plot depicts the top 10 Directors by Sum. Revenue and Sum.Popularity. Christopher Nolan has the highest Popularity to the Revenue collected from his movies. Rather than Steven Spielberg with the highest Sum. Revenue > \$9 B, but less Popularity. Ridley Scott with the lowest Sum. Revenue < \$3.7 B collected from his movies.

[https://public.tableau.com/views/Q4Top10DirectorsMoviesRevenuePopularity/Top10DirectorsRevenuePopularityMovies?:embed=y&:display\\_count=yes&publish=yes](https://public.tableau.com/views/Q4Top10DirectorsMoviesRevenuePopularity/Top10DirectorsRevenuePopularityMovies?:embed=y&:display_count=yes&publish=yes)