



Box Office Engagement; How smaller companies can compete?

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Aamonda Cherry, Javier Covarrubias, Mabel Igori, Michael Jarrell, Raquel Perez
Team 176

Overview

In an industry where the current yearly revenue amounts to 29.5 billion dollars (reported by the U.S. film industry statistics) on average it might be assumed that there is more than enough money to go around, but did you know that most of it goes to 5 leading film companies? It's not from a lack of effort on Indie production companies either, in fact, the top 5 film production companies create a mere 5.7% of films in 2020 meaning that over 94.3% of films made that year were independent film companies. Considering this, how does a smaller production company compete? The following report indicates an analysis to answer this very question.

Goals

1. Showcase a cleaned dataset introducing figures of films made over the past 20 years.
2. Indicate avenues of restricted growth, as well as, excellerated growth in the following categories genre, run-time, and grossing statistics.
3. Provide a solution for Indie film companies looking to increase gross revenue in the coming years.

Data Analysis

Our team first started by searching for datasets that allowed for research encompassing leading films in the industry, as well as, films listed as top films over various years. We settled on two datasets the first

<https://www.kaggle.com/datasets/sanjeetsinghnaik/top-1000-highest-grossing-movies> which offered the highest regarded films and their revenue stats and the second

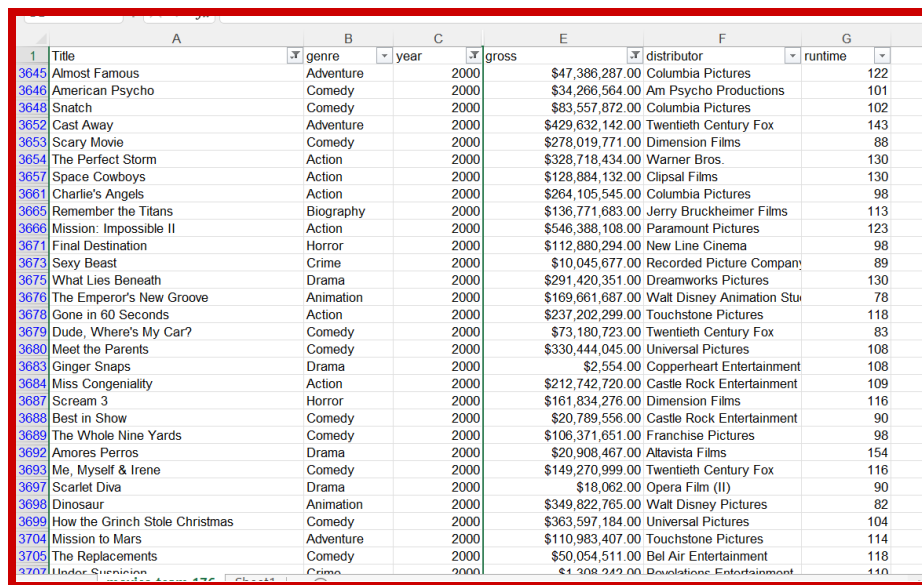
<https://www.kaggle.com/datasets/danielgrijalvas/movies> showing movies over the years and their individual stats.

Data Cleaning

Once selected we decided to omit films that didn't match the following criteria

1. Wasn't filmed within the last 20 years starting from 2000 to 2020
2. Didn't provide data relevant to the inquiry

From there we were able to clean the data to match one another by taking away showdates, multiple forms of run-time per film, cast list, director notes, and international revenue numbers. We then combined our dataset and ordered it by film title. An overview of the final look is pictured below.



	A	B	C	E	F	G
	Title	genre	year	gross	distributor	runtime
3645	Almost Famous	Adventure	2000	\$47,386,287.00	Columbia Pictures	122
3646	American Psycho	Comedy	2000	\$34,266,564.00	Am Psycho Productions	101
3648	Snatch	Comedy	2000	\$83,557,872.00	Columbia Pictures	102
3652	Cast Away	Adventure	2000	\$429,632,142.00	Twentieth Century Fox	143
3653	Scary Movie	Comedy	2000	\$278,019,771.00	Dimension Films	88
3654	The Perfect Storm	Action	2000	\$328,718,434.00	Warner Bros.	130
3657	Space Cowboys	Action	2000	\$128,884,132.00	Cipsal Films	130
3661	Charlie's Angels	Action	2000	\$264,105,545.00	Columbia Pictures	98
3665	Remember the Titans	Biography	2000	\$136,771,683.00	Jerry Bruckheimer Films	113
3666	Mission: Impossible II	Action	2000	\$546,388,108.00	Paramount Pictures	123
3671	Final Destination	Horror	2000	\$112,880,294.00	New Line Cinema	98
3673	Sexy Beast	Crime	2000	\$10,045,677.00	Recorded Picture Compan	89
3675	What Lies Beneath	Drama	2000	\$291,420,351.00	Dreamworks Pictures	130
3676	The Emperor's New Groove	Animation	2000	\$169,661,687.00	Walt Disney Animation Stu	78
3678	Gone in 60 Seconds	Action	2000	\$237,202,299.00	Touchstone Pictures	118
3679	Dude, Where's My Car?	Comedy	2000	\$73,180,723.00	Twentieth Century Fox	83
3680	Meet the Parents	Comedy	2000	\$330,444,045.00	Universal Pictures	108
3683	Ginger Snaps	Drama	2000	\$2,554.00	Copperheart Entertainment	108
3684	Miss Congeniality	Action	2000	\$212,742,720.00	Castle Rock Entertainment	109
3687	Scream 3	Horror	2000	\$161,834,276.00	Dimension Films	116
3688	Best in Show	Comedy	2000	\$20,789,556.00	Castle Rock Entertainment	90
3689	The Whole Nine Yards	Comedy	2000	\$106,371,651.00	Franchise Pictures	98
3692	Amores Perros	Drama	2000	\$20,908,467.00	Altavista Films	154
3693	Me, Myself & Irene	Comedy	2000	\$149,270,999.00	Twentieth Century Fox	116
3697	Scarlet Diva	Drama	2000	\$18,062.00	Opera Film (II)	90
3698	Dinosaur	Animation	2000	\$349,822,765.00	Walt Disney Pictures	82
3699	How the Grinch Stole Christmas	Comedy	2000	\$363,597,184.00	Universal Pictures	104
3704	Mission to Mars	Adventure	2000	\$110,983,407.00	Touchstone Pictures	114
3705	The Replacements	Comedy	2000	\$50,054,511.00	Bel Air Entertainment	118
3707	Under Suspicion	Crime	2000	\$1,308,242.00	Douglas Entertainment	110

Figure 1

We also provided a data dictionary showing the nulls present in the dataset and the ways in which we addressed them (pictured below). Once the data was cleaned and organized we were easily able to progress further focusing on avenues in which an indie film company can begin to compete with the top contenders. Although, later on we decided to not include run-time for our overall analysis.

Name_of_column	The column's data format	Brief description of the field. If the field follows a specific format (e.g. a specific date format) include that here too.
Movie_id	INT/AUTO INCREMENT	This is a placeholder for the movies being looked at and there order on the list of 1000.
Title	STRING	Displays the movie title and year that it came out.
Distributor	STRING	Movie production company ordered by A to Z.
Gross	INT	Total Sales
Genre	STRING	Movie category
Year	INT	What year movie was released
Runtime	INT	Total movie time

Figure 2

Dashboard

Finally, we come to the dashboard. Our dashboard displays four graphs created to display top film productions by gross, lowest film productions by gross and overall revenue gained by genre. It should be noted that Indie company films are not listed since they are the audience of interest; instead the team focused on companies that receive film budgets of over 11 million as they are not considered non-indie film productions.

Top Grossing Distributors

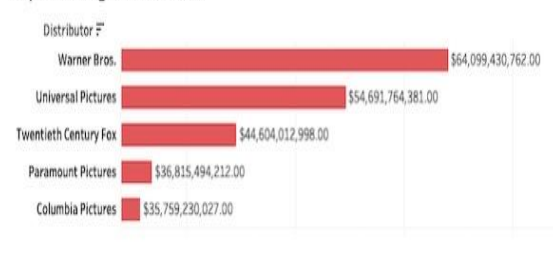


Figure 3

Least Grossing Distributors

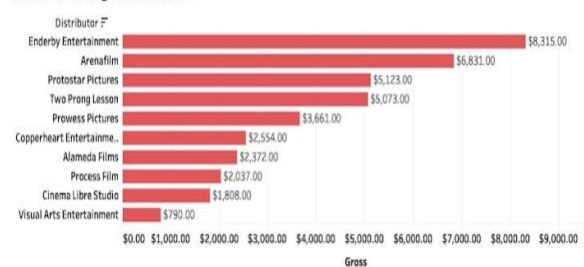


Figure 4

In figures 3 & 4, the top performing companies versus the lowest performing companies are listed. As you can see, Warner Bros. production company took home over \$64 billion dollars in revenue over the past 20 years with Universal Pictures coming in only \$10 million below them. Meanwhile, the lowest income over the last 20 years was Visual Arts Entertainment with a take home of only \$790.00 dollars that year.

Figure 5

Total Count by Genre

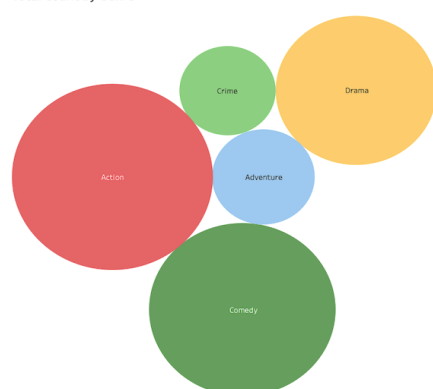
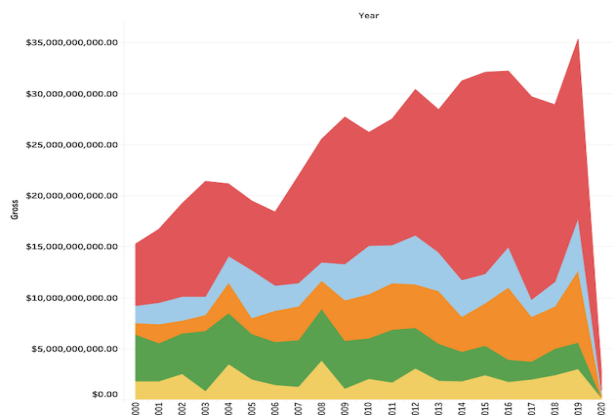


Figure 6



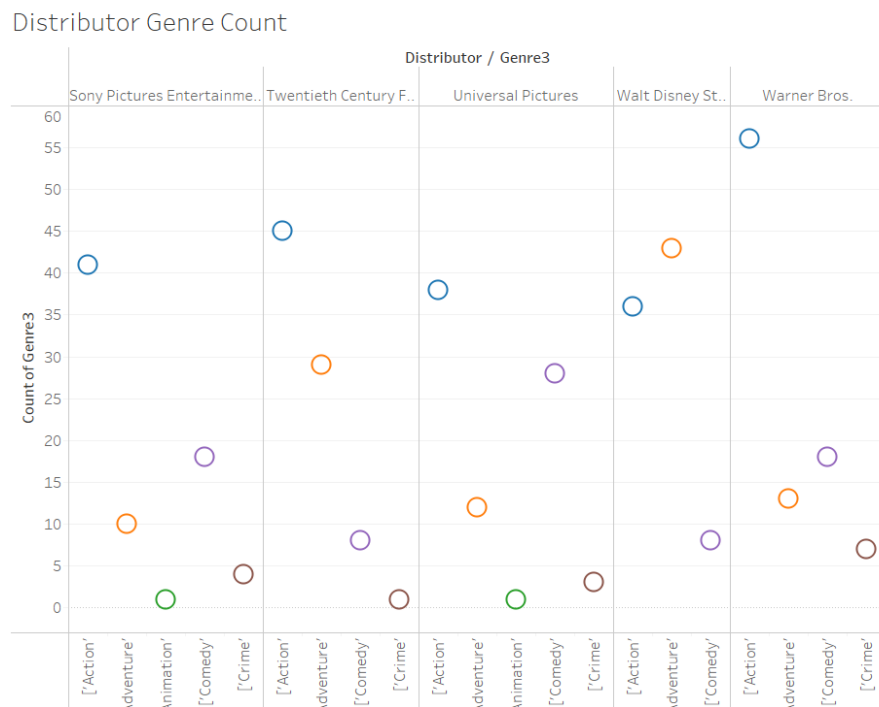


Figure 7

In order to better understand how these numbers came to be we narrowed down what types of films were being produced during this 20 year time frame. Deciding to focus on genre we counted the overall films made broken into genre's as pictured in figure 5. What it concludes is that Action, Comedy, and Drama genres had the highest count of films made in that 20 year time span. Action incredibly having filmed 1,295 titles within that time. While Comedy and Drama made 1,116 and 831 respectively during the same time. It also shows that the Adventure genre and Crime come in at the end of the top five film genres made. Adventure having 339 titles and Crime having 298 titles filmed. So, does that mean that more production creates higher revenue?

As figure 6 shows that doesn't seem to be the case. For as Comedy made over 777 more films than the pictured Adventure genre the category created less revenue than the competing genre. Adventure films taking a gross over \$5 million dollars in revenue while Comedy only grossed \$1 billion over the 20 years allotted. Another telling indication is in the absence of count in figure 5 compared to figure 6; where in Comedy created 1116 films that year it is found to be number four on the top 5 revenue making genre's placed below Animation which didn't even make it into the top 5 genre count shown in figure 5. Indicating that the amount of films made doesn't necessarily correspond with revenue increase. Instead it is the genre that is being produced that seems to give these companies higher monetary income better expressed in figure 7. As you can see, Warner Brother's the highest grossing film production company has also created the highest number of movies in the Action genre compared to their competitors.

Conclusion

While Indie production companies have many obstacles to overcome when competing with leaders in the Entertainment Industry there are achievable ways to help lessen that divide between the two. Having analyzed the dataset, as mentioned above, we believe that by focusing on movies in the top genres of Action, Adventure and Animation a smaller company has the opportunity to grow and increase their overall revenue. It is best to avoid genre such as Documentaries, Romances and Horror films, to name a few, if they want to have a chance at maximizing their revenue while limiting their film production cost. For as shown above, sheer amount of films made doesn't mean more revenue. This concludes our findings, our suggestion once again is to create less films and focus more attention to the top 3 genre's to grow overall gross.