PREPARED FOR

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Executive Summary

As an independent firm hired by Walt Disney Pictures, our goal was to develop a thorough and thoughtful statistical report for the firm to use to predict the profitability of future films based on the characteristics of a given film. Through creating and analyzing various statistical techniques and models, we believe it is in the company's best interest to pursue additional opportunities through mergers, acquisitions, and licensing transactions in order to produce more franchise films. However, acquiring the rights to a film is not enough. Upon acquiring rights, and in order to drive profits, we suggest Walt Disney Pictures make films with the following qualities: Action (primary genre), PG or PG-13 (rating), and a significant production budget ($). To test the power of these variables, a regression model was created to predict profits prior to finalizing an M&A transaction.

Introduction

As a result of this analysis, and in order to drive profits, we believe Walt Disney Pictures should pursue additional franchise opportunities through mergers, acquisitions, and licensing transactions. Through a series of 17 statistical tests and 11 variables from a data set of films from 2017, we have found that franchise films require a significant production budget, but generate significant profits. Therefore, to maximize their ability to generate profit for the firm, the films must be categorized as Action (genre) and rated either PG or PG-13 by the Motion Picture Association of America (MPAA). We believe this is the best decision for Walt Disney Pictures, given that the firm has had success with M&A in recent years and that franchise films require extensive capital to produce, staff, and market.

Why Produce More Franchise Films?

Throughout this study, a total of six hypothesis tests were conducted. Three of the six were one sample hypothesis tests and three of the six were 2-sample hypothesis tests. According to a one sample hypothesis test on profit, the average film released in 2017 generated above $250,000,000 in profit. Surprisingly, this includes films of varying genres, production budgets, runtime, rating, franchise relation, and production studios. Thus, given the significant profits of films in 2017, we recommend adding more movies to Walt Disney Pictures' 10-year business plan. However, films should not be added willy-nilly. The firm needs to be purposeful, thoughtful, and masterful in choosing which movies to produce and why. In fact, according to the 2-sample hypothesis test, profit is greater, at the population level, for franchise films than for non-franchise films. Thus, synthesizing the results of these hypothesis tests, we recommend Disney pursue production of more franchise films than non-franchise films in order to maximize profits for the firm.

However, profits do not come without a cost. In a 2-sample hypothesis test comparing franchise films and profit, production budget was found to be greater, at the population level, for franchise films than for non-franchise films. To seasoned industry professionals, this is not a surprise. However, it is something that needs to be considered before any M&A or licensing transaction is finalized. Franchise films require extensive capital to write, produce, release, and market. Therefore, before any transaction is made, Disney

must prepare to budget extensive capital for future franchise movie. The results of all the hypothesis tests are included in Appendix D, below.

How Can We Predict the Profits of a Film Prior to an M&A Transaction?

For additional analysis, multivariate regression was employed to develop a model to predict the profitability of a film based on a set of variables/predictors. The model can be applied internally by Walt Disney Pictures to predict the profitability of a film in a fast and efficient manner. As a result, this allows the firm to predict the profit of a potential sequel based on the performance of an original movie and/or predict the profit of a film acquired—or thought to be acquired—through an M&A transaction. The final model to be used was determined to be:

$$Profit=[(PG\text{-}13*83{,}371{,}277.60)]+[(PG*213{,}564{,}595.21)]+[(Opening\ Weekend\ USA*4.76)]+[(action*226{,}050{,}664.39)]+26{,}016{,}141.47.$$

This model was found to have an Adjusted R Square Value of 0.7357, which suggests that the model can make *reasonable* predictions within the profit ranges of $(29,283,381.00) and $1,107,539,889.00. To estimate the profit of a given film, simply replace the variables (PG, PG-13, Action, and Opening Weekend USA) with actual values.[1] Additional information related to this model can be found in Appendices A-C, below.

Together with the conclusions from the hypothesis tests, this model should be employed by Walt Disney Pictures to guide corporate strategy related to M&A transactions. Being able to predict the profitability of a film prior to an M&A transaction has significant benefits, especially given the costs of brokering an M&A transaction and the costs of the eventual production of a movie. Additional appendices are attached

[1] For binary fields, such as PG, PG-13, and Action (genre), simply insert the number one if the film has these characteristics. If the film does not have these characteristics, insert a zero.

Appendix A: Regression Model and Interpretation

The final regression model balances the best Adjusted R Square Value with the necessary variables associated with Walt Disney Pictures's primary product line (i.e. PG and PG-13 rated movies). The model predicts profits based on a film's rating (PG or PG-13), its performance opening weekend in the USA, and the genre of the film (Action). The final model, in equation form, is presented in Figure 1, below. The final model, as an excel output, is presented in Figure 2, below.

Profit=[(PG-13)(83,371,277.60)]+ [(PG)(213,564,595.21)]+[(Opening Weekend USA)(4.76)]+[(action)(226,050,664.39)]+26,016,141.47

Figure 1: Final Regression Model Equation

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.870217664
R Square	0.757278784
Adjusted R Square	0.735703564
Standard Error	163462168.2
Observations	50

Interpretation: 73.6% of the variation can be explained through the variation in the other columns

Adjusted R Square From"Remove Universal" Tab

Adjusted R Square 0.74863324

Interpretation: 74.9% of the variation can be explained through the variation in the other columns

% change between two Adjuted R Squares

-1.76%

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	4	3.75141E+18	9.37854E+17	35.0994711	2.63713E-13
Residual	45	1.20239E+18	2.67199E+16		
Total	49	4.95381E+18			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	26,016,141.47	38362691.52	0.67816257	0.50114115	-51250285.53	103282568	-51250286	103282568
Opening Weekend USA ($)	4.76	0.513719115	9.269783056	5.2922E-12	3.727381335	5.79674816	3.72738134	5.79674816
PG	213,564,595.21	75011797.6	2.847080087	0.00662504	62483079.47	364646111	62483079.5	364646111
PG-13	83,371,277.60	53936257.77	1.545737154	0.12917246	-25261921.95	192004477	-25261922	192004477
Action	226,050,664.39	59204467.4	3.818135258	0.00040871	106806746	345294583	106806746	345294583

Figure 2: Final Model as an Excel Output

Because of the range of the variable "Opening Weekend USA," this model can only be applied to films that made or are estimated to make between $158,845.00 and $220,009,584.00 during their opening weekend in the USA. However, despite this range, Opening Weekend USA is undoubtedly the most powerful and influential variable, as it has a combined effect of 1,046,943,453.38. Conversely, PG-13 is the weakest variable with a combined effect of 83,371,277.60. The combined effect of all the variables included in the final model are displayed in Figure 3, below.

Variable	Coefficients	Range	Power of Variable
Opening Weekend USA ($)	4.76	219,850,739.00	1,046,943,453.38
PG	213,564,595.21	1.00	213,564,595.21
PG-13	83,371,277.60	1.00	83,371,277.60
Action	226050664.4	1.00	226,050,664.39

Figure 3: Combined Effect of All Variables in Final Model

Appendix B: Regression Model Statistical Analysis

Despite having one variable that is not statistically significant (i.e. PG-13), this final model is statistically sound. The model itself has an Adjusted R Square Value of 0.7357, suggesting that 73.57% of the variation in a film's profit can be explained through whether or not the film is rated PG, whether or not the film is rated PG-13, whether or not the film's primary genre is action, and the film's performance during its opening weekend in the USA. The significance of the model (Significance F) is 2.64E-13, well below 0.05. The overall quality of the model is included in Figure 4, below.

SUMMARY OUTPUT					
Regression Statistics					
Multiple R	0.870217664				
R Square	0.757278784		Adjusted R Square From"Remove Universal" Tab		
Adjusted R Square	0.735703564	Interpretation: 73.6% of the variation can be explained through the variation in the other columns	Adjusted R Square	0.74863324	Interpretation: 74.9% of the variation can be explained through the variation in the other columns
Standard Error	163462168.2				
Observations	50				

Figure 4: Overall Quality of the Model & Its Interpretation

Based on the power of these independent variables, the output of this model (i.e. the ability to predict a film's profit) ranges between $(29,283,381.00) and $1,107,539,889.00. This should apply to the majority of movies produced in the United States. However, this model should not be applied to movies expected to make more or less than the specified ranges. Finally, and most importantly, the model does not take into consideration the performance of a film outside of the USA—a separate model will need to be created to asses and predict the performance of film, be it American or foreign, in a country besides the

USA. Figure 5, below, show how the model can be used to predict a film's profitability based on the film's rating, genre, and predicted opening weekend performance in the USA.

Profit=[(PG-13)*(83,371,277.60)]+ [(PG)*(213,564,595.21)]+[(Opening Weekend USA)*(4.76)]+ [(action)*(226,050,664.39)]+26,016,141.47

Profit=[(**1**)*(83,371,277.60)]+ [(**0**)*(213,564,595.21)]+[(**$150,000,000**)*(4.76)]+[(**1**)*(226,050,664.39)] +26,016,141.47

Profit= $1,049,438,083.46

Figure 5: Final Regression Model Use Example for a PG-13, Action Film with a Predicted Opening Weekend (USA) of $150,000,000

Appendix C: Regression Model Development

The initial regression model contained 14 variables of which 10 did not hold statistical significance. In other words, 10 out of the 14 variables had p values greater than 0.05. A thorough and thoughtful review of the residual plots showed no clear and obvious patterns and thus no transformations were attempted. The normal probability plot looks more or less like a straight line with a positive slope, as indicated in Figure 6, below. The initial model yielded an adjusted R square of 0.705, suggesting that 70.5% of the variations in profit can be explained through the variation in other variables. The significance F was determined to be 4.46E-08, suggesting that the initial model, from a statistical point of view, is a "good" model. The initial model, in equation form, is located in Figure 7, below.

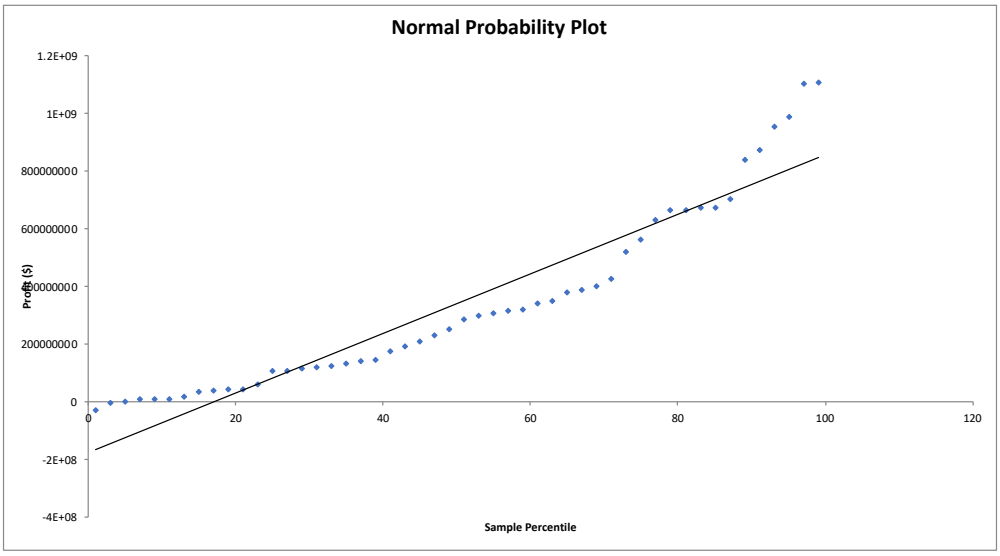


Figure 6: Normal Probability Plot for Initial Regression Model

Profit = [(78,954,688.66)(Universal Pictures)] - [(10,437,733.32)(20th Century Fox)] - [(90,506,698.07)(Walt Disney Pictures)] + [(294,228,962.22)(Action)] + [(68,928,487.58)(Sci-Fi)] + [(117,593,754.02)(PG-13)] + [(309,701,283.94)(PG)] - [(7,214,218.08)(franchise)] + [(75,660,426.81)(Oscar Wins)] - [(10,119,938.81)(Oscar Nominations)] + [(775,574.73)(Runtime in minutes)] - [(0.42)(YouTube Trailer Views)] + [(5.38)(Opening Weekend USA $)] - [(0.58)(Production Budget $)] - 89,514,456.16

Figure 7: Initial Regression Model in Equation Form

A sample of the residual plots from the initial model are included in Figures 8-10, below. Notice how in each of the residual plots no obvious patterns are present. For example, as shown in Figure 8, Production Budgets ($) vary tremendously across the movie industry. Likewise, in Figure 9, there are no patterns related to how many times a movie trailer is viewed on YouTube. Additionally, Figure 10 suggests that the majority of movies do not get nominated for an Oscar. Therefore, due to a lack of patterns in the residual plots, no transformations were needed to refine the data set.

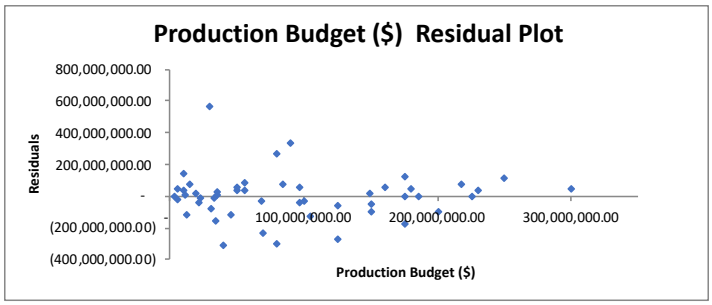


Figure 8: Residual Plot for Production Budget (USD)

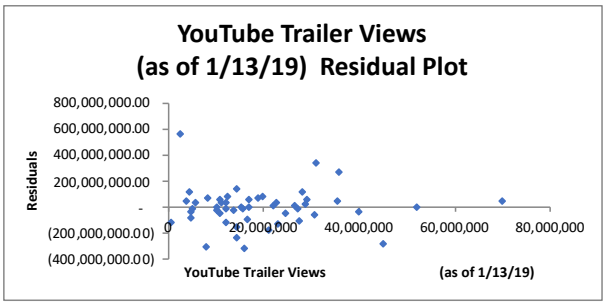


Figure 9: Residual Plot for YouTube Trailer Views

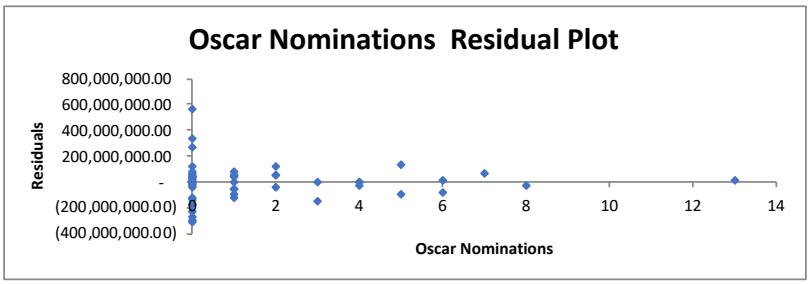


Figure 10: Residual Plot for Oscar Nominations

After analyzing and reviewing the initial model, it was determined that some variables were better predictors of a film's profit than others. Therefore, in order to refine the model, variables were removed one-by-one based on the p value of the specific variable. For a variable to be removed, the p value had to be above 0.05, indicating statistical insignificance, ***and*** it had to be the largest p-value in the data set. For example, the first variable removed from the initial model was Franchise (binary), which yielded the highest p value in the dataset at p=0.94. Figure 11, below, shows the data from the initial model with the Franchise variable highlighted in red.[2] After removing Franchise from the model, regression was repeated for the remaining 13 variables.

[2] For ease of identification, the worst variable (largest p value above 0.05) is highlighted red in each of the 11 regression model tabs. Tab 18 does not have a variable highlighted as all variables are below 0.05 and are thus statistically significant.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.888500962
R Square	0.78943396
Adjusted R Square	0.705207544
Standard Error	172635371.8
Observations	50

Interpretation: 70.5% of the variation can be explained through the variation in the other columns

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	14	3.91071E+18	2.79336E+17	9.37275975	4.45682E-08
Residual	35	1.0431E+18	2.9803E+16		
Total	49	4.95381E+18			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	(89,514,456.16)	292565545.8	-0.305963766	0.76144481	-683454090.3	504425178	-683454090.3	504425178
Production Budget ($)	(0.58)	0.684239965	-0.845254105	0.40371041	-1.967437616	0.81072434	-1.967437616	0.81072434
Opening Weekend USA ($)	5.38	1.05917258	5.076130695	1.2745E-05	3.226263791	7.52673309	3.226263791	7.52673309
YouTube Trailer Views	(0.42)	2.420294647	-0.172980293	0.86366341	-5.332122629	4.49479607	-5.332122629	4.49479607
Runtime (min)	775,574.73	2481876.675	0.312495272	0.75651849	-4262902.788	5814052.24	-4262902.788	5814052.24
Oscar Nominations	(10,119,938.81)	23967200.17	-0.422241177	0.67543161	-58775941.9	38536064.3	-58775941.9	38536064.3
Oscar wins	75,660,426.81	68675796.21	1.101704399	0.27810898	-63758851.57	215079705	-63758851.57	215079705
Franchise	(7,214,218.08)	98550601.52	-0.073203187	0.94206119	-207282575.5	192854139	-207282575.5	192854139
PG	309,701,283.94	129625381.3	2.389202491	0.02240723	46547769.62	572854798	46547769.62	572854798
PG-13	117,593,754.02	70862207.13	1.659470666	0.10595662	-26264174.48	261451683	-26264174.48	261451683
Sci-Fi	68,928,487.58	116628775.3	0.591007557	0.55831306	-167840513.9	305697489	-167840513.9	305697489
Action	294,228,962.22	94154339	3.12496445	0.00356431	103085492.1	485372432	103085492.1	485372432
Walt Disney Pictures	(90,506,698.07)	107855953.7	-0.839144201	0.40708355	-309465924.8	128452529	-309465924.8	128452529
20th Century Fox	(10,437,733.32)	86661627.02	-0.120442388	0.90482148	-186370189.4	165494723	-186370189.4	165494723
Universal Pictures	78,954,688.66	93194323.63	0.847204911	0.40263711	-110239846.6	268149224	-110239846.6	268149224

Figure 11: Initial Model with Franchise Variable Highlighted

Following the system outlined above, the remaining independent variables were removed one-by-one until all variables in the model were found to be statistically significant. For ease of identification, the worst variable on every tab, and, subsequently, the variable to be removed for the next analysis, is highlighted red, such as in Figure 11.

Appendix D: Hypothesis Test Results

Throughout this study, a total of six hypothesis tests were conducted. Three of the six were one sample hypothesis tests and three of the six were 2-sample hypothesis tests. In this section, I will only discuss the test that are relevant to the business decision of pursuing more M&A for franchise film production.

A one sample hypothesis test was conducted to answer the question: Does the average film make more than $250,000,000 in profit? Results of the analysis are included in the corresponding excel doc, but a short summary of the results of the hypothesis tests and the confidence intervals are displayed in Table 1,

below. Take note that the film industry has significant profits and that, in order to capture those profits, Disney should make movies relevant to consumers.

Table 1: Results of the Relevant 1-Sample Hypothesis Test

Question	Hypothesis	Tale Test	Decision	Conclusion	Business Decision
Does the average film make more than $250,000,000 in profit?	Ho: mu<=250,000,000 Ha: mu>250,000,000	Right Tale Test	Reject Ho	Given our sample data, we can say, at the 95% confidence level, that the average profit generted by a movie exceeds $250,000,000.	The average film released in 2017 generated above $250,000,000 in profit.Thus, we recommend adding more movies to Disney's 10-year business plan.

Three two-sample hypothesis tests were conducted to answer the following questions: 1) Is there evidence that franchise films generate more profit (at the population level) than non-franchise films? and 2) Is there evidence that franchise films have a larger production budget (at the population level) than non franchise films? Results of the analysis are included in the corresponding excel doc, but a short summary of the results of the hypothesis tests and the confidence intervals are displayed in Table 2, below. Notice that franchise films generate significantly more profits than non-franchise films and that franchise films have a much larger production budget than non-franchise films.

Table 2: Results of the Relevant 2-Sample Hypothesis Test

Question	Decision	Conclusion	Business Decision
Is there evidence that franchise films generate more profit (at the population level) than non-franchise films?	Reject Ho	Given our sample data, we can say that the mu for franchise films is greater than the mu for non-franchise films.	It looks like profit, at the population level, is greater for franchise films than for non franchise films. Thus, we recommend Disney pursue additional franchise opportunities through M&A licensing transactions.
Is there evidence that franchise films have a larger production budget (at the population level) than non franchise films?	Reject Ho	Given our sample data, we can say that the mu for franchise films is greater than the mu for non-franchise films.	It looks like production budget, at the population level, is greater for franchise films than for non franchise films. Thus, franchise films are more expensive to make than non-franchise films. Disney should thus budget for extensive capital for future franchise movies.

Appendix E: Data Analysis & Descriptive Statistics

Descriptive statistics and visual aids reveal that the film industry has tremendous variability. Histograms of Production Budget, Profit, Opening Weekend USA, and YouTube Trailer Views reveal a strong right skew, suggesting that is very difficult to produce and release a high demand,[3] profitable movie on a small budget. Likewise, histograms of Oscar nominations and Oscar wins, as indicated by the strong positive skew, show how incredibly difficult it is to both be nominated and awarded an Oscar. Currently, of all the variables, only runtime (min) suggests a normal distribution, as shown in Figure 3. Pie charts are displayed for both ratings of movies (45% R, 40% PG-13, 14% PG) and franchise relation (60% franchise, 40% non-franchise). Finally, histograms of primary genre and primary production studio are presented—these do not reveal any specific trends. A sample of histograms and other visual data from this analysis are included in Figures 12-15, below. The remaining visuals can be found in the corresponding excel document. Figure 16 presents the summary level statistics for all variables in the analysis.

[3] Demand is defined here as the number of times a trailer is viewed on YouTube.

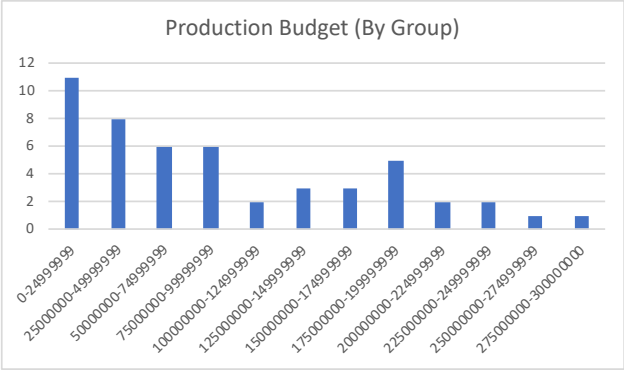


Figure 12: Histogram of Production Budget ($)

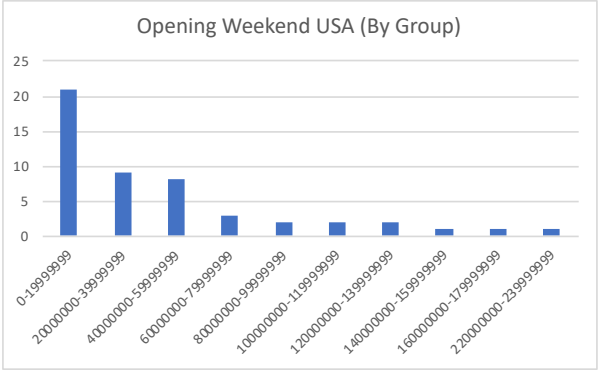


Figure 13: Histogram of Opening Weekend USA

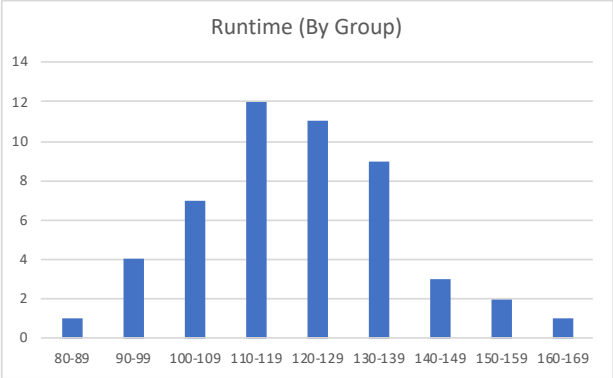


Figure 14: Histogram of Movie Runtimes (min)

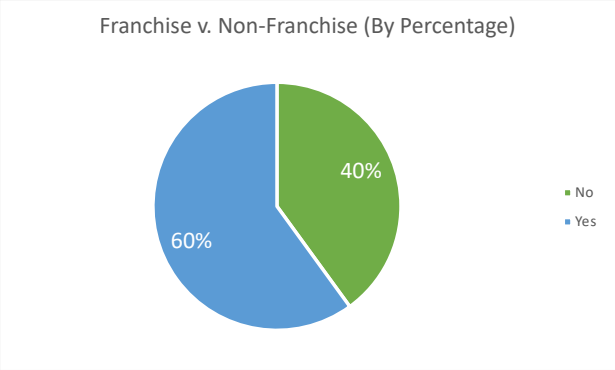


Figure 15: Franchise v. Non-Franchise Distribution in Sample

Global Box Office Revenue	
Mean	$ 434,934,163.94
Standard Error	52,105,379.56
Median	$ 363,532,889.00
Mode	#N/A
Standard Deviation	368,440,672.20
Sample Variance	1.35749E+17
Kurtosis	-0.343585681
Skewness	0.768681218
Range	$ 1,322,488,230.00
Minimum	$ 10,051,659.00
Maximum	$ 1,332,539,889.00
Sum	$ 21,746,708,197.00
Count	50

Opening Weekend USA	
Mean	$ 43,499,688.96
Standard Error	7064905.987
Median	$ 32,220,748.50
Mode	#N/A
Standard Deviation	49956429.32
Sample Variance	2.49564E+15
Kurtosis	2.633422155
Skewness	1.602269704
Range	$ 219,850,739.00
Minimum	$ 158,845.00
Maximum	$ 220,009,584.00
Sum	$ 2,174,984,448.00
Count	50

Oscar Nominations	
Mean	1.7
Standard Error	0.378234351
Median	0.5
Mode	0
Standard Deviation	2.674520747
Sample Variance	7.153061224
Kurtosis	5.774670009
Skewness	2.208856283
Range	13
Minimum	0
Maximum	13
Sum	85
Count	50

Primary Genre	
Sci-Fi	10
Musical	3
Action	10
Animation	5
Drama	7
Horror	3
Comedy	4
Biography	7
Crime	1
Count	50

Production Budget	
Mean	$ 93,312,000.00
Standard Error	10,888,849.06
Median	$ 74,500,000.00
Mode	$ 175,000,000.00
Standard Deviation	76,995,790.08
Sample Variance	5.92835E+15
Kurtosis	-0.334930321
Skewness	0.77717632
Range	$ 296,500,000.00
Minimum	$ 3,500,000.00
Maximum	$ 300,000,000.00
Sum	$ 4,665,600,000.00
Count	50

YouTube Trailer Views (as of 1/13/19)	
Mean	19,391,245.32
Standard Error	1,903,872.86
Median	15,950,666.00
Mode	#N/A
Standard Deviation	13,462,414.10
Sample Variance	181,236,593,504,295.00
Kurtosis	3.16
Skewness	1.47
Range	69,151,676.00
Minimum	824,618.00
Maximum	69,976,294.00
Sum	969,562,266.00
Count	50

Oscar wins	
Mean	0.38
Standard Error	0.124178936
Median	0
Mode	0
Standard Deviation	0.878077678
Sample Variance	0.771020408
Kurtosis	6.423527921
Skewness	2.549302901
Range	4
Minimum	0
Maximum	4
Sum	19
Count	50

Primary Production Studio	
Walt Disney Pictures	7
20th Century Fox	6
Universal Pictures	6
Paramount Pictures	4
Columbia Pictures	3
New Line Cinema	3
Warner Bros	2
Dreamworks	2
Fox Searchlight Pictures	2
Apatow Production	1
Atlas Entertainment	1
BBC Films	1
Beijing Donfang Internatioanl Cultural Communications Company	1
Chestnut Ridge Productions	1
Clubhouse Pictures	1
Cross Creek Pictures	1
DC Entertainment	1
Focus Features	1
Frenesy Film Company	1
Perfect World Pictures	1
Scott Rudin Productions	1
Summit Entertainment	1
Syncopy	1
TriStar Productions	1
Count	50

Profit	
Mean	$ 341,622,163.94
Standard Error	44,966,242.68
Median	$ 267,895,345.00
Mode	#N/A
Standard Deviation	317,959,351.23
Sample Variance	1.01098E+17
Kurtosis	-0.111459317
Skewness	0.924310572
Range	$ 1,136,823,270.00
Minimum	$ (29,283,381.00)
Maximum	$ 1,107,539,889.00
Sum	$ 17,081,108,197.00
Count	50

Runtime (min)	
Mean	120.62
Standard Error	2.310912886
Median	120
Mode	118
Standard Deviation	16.34062173
Sample Variance	267.0159184
Kurtosis	0.119886565
Skewness	0.268455723
Range	75
Minimum	89
Maximum	164
Sum	6031
Count	50

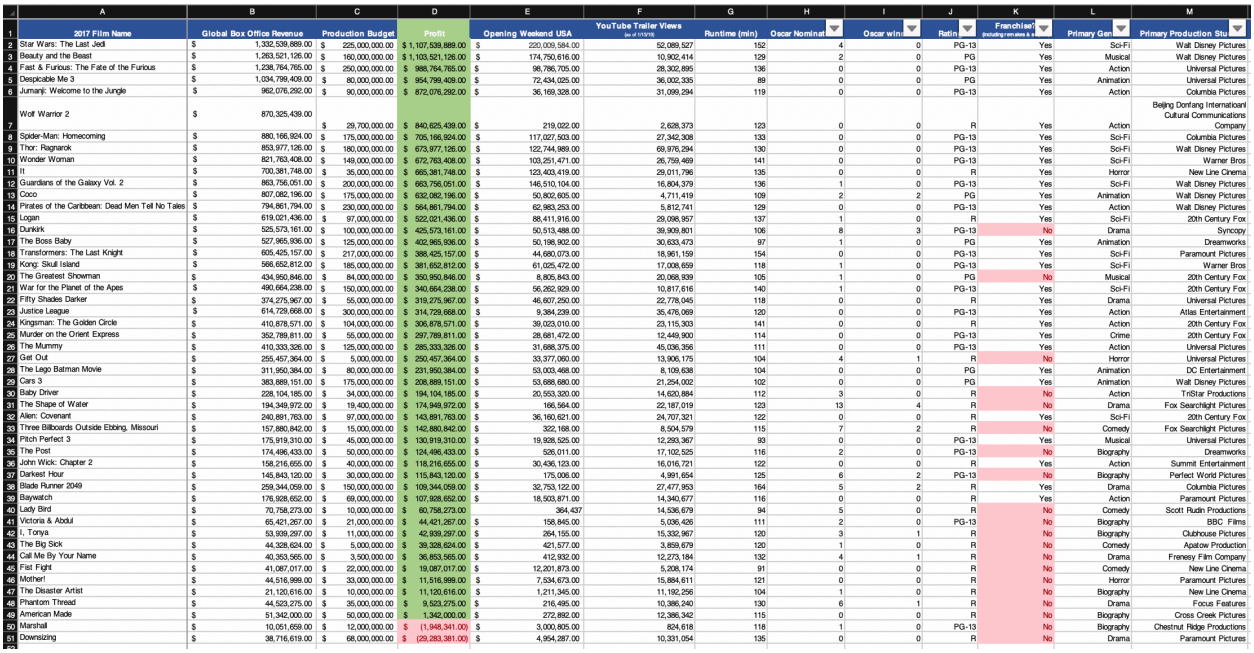
Rating	
PG	7
PG-13	20
R	23
Count	50

Franchise	
Yes	28
No	22
Count	50

Figure 16: Descriptive Statistics for all Variable Fields

Appendix F: Data Analysis & Descriptive Statistics

A data set of 50 films from 2017 was used for this statistical analysis. Variables included: Film Name, Global Box Office Revenue ($), Production Budget ($), Profit ($), Opening Weekend USA ($), YouTube Trailer Views, Runtime (min), Rating, Franchise (Yes/No), Primary Genre, and Primary Production Studio. Profit served as the dependent variable, while the remaining predictors served as the independent variables. The data for this analysis was aggregated and collected from various sources including Statista, YouTube, and Internet Movie Database (IMDB). The full data set can be found in the corresponding excel document, but a screenshot of the raw data is included in Figure 17, below.



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	2017 Film Name	Global Box Office Revenue	Production Budget	Profit	Opening Weekend USA	YouTube Trailer Views (as of 1/1/18)	Runtime (min)	Oscar Nominations	Oscar wins	Rating	Franchise? (including remakes &	Primary Genre	Primary Production Studio
2	Star Wars: The Last Jedi	$ 1,332,539,889.00	$ 225,000,000.00	$ 1,107,539,889.00	$ 220,009,584.00	52,089,527	152	4	0	PG-13	Yes	Sci-Fi	Walt Disney Pictures
3	Beauty and the Beast	$ 1,263,521,126.00	$ 160,000,000.00	$ 1,103,521,126.00	$ 174,750,616.00	10,902,414	129	2	0	PG	Yes	Musical	Walt Disney Pictures
4	Fast & Furious: The Fate of the Furious	$ 1,238,764,765.00	$ 250,000,000.00	$ 988,764,765.00	$ 98,786,705.00	28,302,895	136	0	0	PG-13	Yes	Action	Universal Pictures
5	Despicable Me 3	$ 1,034,799,409.00	$ 80,000,000.00	$ 954,799,409.00	$ 72,434,025.00	36,002,335	89	0	0	PG	Yes	Animation	Universal Pictures
6	Jumanji: Welcome to the Jungle	$ 962,076,292.00	$ 90,000,000.00	$ 872,076,292.00	$ 36,169,328.00	31,099,294	119	0	0	PG-13	Yes	Action	Columbia Pictures
7	Wolf Warrior 2	$ 870,325,439.00	$ 29,700,000.00	$ 840,625,439.00	$ 219,022.00	2,628,373	123	0	0	R	Yes	Action	Beijing Dontang International Cultural Communications Company
8	Spider-Man: Homecoming	$ 880,166,924.00	$ 175,000,000.00	$ 705,166,924.00	$ 117,027,503.00	27,342,308	133	0	0	PG-13	Yes	Sci-Fi	Columbia Pictures
9	Thor: Ragnarok	$ 853,977,126.00	$ 180,000,000.00	$ 673,977,126.00	$ 122,744,989.00	69,976,294	130	0	0	PG-13	Yes	Sci-Fi	Walt Disney Pictures
10	Wonder Woman	$ 821,763,408.00	$ 149,000,000.00	$ 672,763,408.00	$ 103,251,471.00	26,759,469	141	0	0	PG-13	Yes	Sci-Fi	Warner Bros
11	It	$ 700,381,748.00	$ 35,000,000.00	$ 665,381,748.00	$ 123,403,419.00	29,011,796	135	0	0	R	Yes	Horror	New Line Cinema
12	Guardians of the Galaxy Vol. 2	$ 863,756,051.00	$ 200,000,000.00	$ 663,756,051.00	$ 146,510,104.00	16,904,379	136	1	0	PG-13	Yes	Sci-Fi	Walt Disney Pictures
13	Coco	$ 807,082,196.00	$ 175,000,000.00	$ 632,082,196.00	$ 50,802,605.00	4,711,419	109	2	2	PG	Yes	Animation	Walt Disney Pictures
14	Pirates of the Caribbean: Dead Men Tell No Tales	$ 794,861,794.00	$ 230,000,000.00	$ 564,861,794.00	$ 62,983,253.00	5,812,741	129	0	0	PG-13	Yes	Action	Walt Disney Pictures
15	Logan	$ 619,021,436.00	$ 97,000,000.00	$ 522,021,436.00	$ 88,411,916.00	29,098,957	137	1	0	R	Yes	Sci-Fi	20th Century Fox
16	Dunkirk	$ 525,573,161.00	$ 100,000,000.00	$ 425,573,161.00	$ 50,513,488.00	39,909,801	106	8	3	PG-13	No	Drama	Syncopy
17	The Boss Baby	$ 527,965,936.00	$ 125,000,000.00	$ 402,965,936.00	$ 50,196,902.00	30,633,473	97	1	0	PG	Yes	Animation	Dreamworks
18	Transformers: The Last Knight	$ 605,425,157.00	$ 217,000,000.00	$ 388,425,157.00	$ 44,680,073.00	18,961,159	154	0	0	PG-13	Yes	Sci-Fi	Paramount Pictures
19	Kong: Skull Island	$ 566,652,812.00	$ 185,000,000.00	$ 381,652,812.00	$ 61,025,472.00	17,008,659	118	1	0	PG-13	Yes	Sci-Fi	Warner Bros
20	The Greatest Showman	$ 434,950,846.00	$ 84,000,000.00	$ 350,950,846.00	$ 8,805,843.00	20,068,939	105	1	0	PG	No	Musical	20th Century Fox
21	War for the Planet of the Apes	$ 490,664,238.00	$ 150,000,000.00	$ 340,664,238.00	$ 56,262,929.00	10,817,616	140	1	0	PG-13	Yes	Sci-Fi	20th Century Fox
22	Fifty Shades Darker	$ 374,275,967.00	$ 55,000,000.00	$ 319,275,967.00	$ 46,607,250.00	22,778,045	118	0	0	R	Yes	Drama	Universal Pictures
23	Justice League	$ 614,729,668.00	$ 300,000,000.00	$ 314,729,668.00	$ 9,384,239.00	35,476,069	120	0	0	PG-13	Yes	Action	Atlas Entertainment
24	Kingsman: The Golden Circle	$ 410,878,571.00	$ 104,000,000.00	$ 306,878,571.00	$ 39,023,010.00	23,115,303	141	0	0	R	Yes	Action	20th Century Fox
25	Murder on the Orient Express	$ 352,789,811.00	$ 55,000,000.00	$ 297,789,811.00	$ 28,681,472.00	12,449,900	114	0	0	PG-13	Yes	Crime	20th Century Fox
26	The Mummy	$ 410,333,326.00	$ 125,000,000.00	$ 285,333,326.00	$ 31,688,375.00	45,036,356	111	0	0	PG-13	Yes	Action	Universal Pictures
27	Get Out	$ 255,457,364.00	$ 5,000,000.00	$ 250,457,364.00	$ 33,377,060.00	13,906,175	104	4	1	R	No	Horror	Universal Pictures
28	The Lego Batman Movie	$ 311,950,384.00	$ 80,000,000.00	$ 231,950,384.00	$ 53,003,468.00	8,109,638	104	0	0	PG	Yes	Animation	DC Entertainment
29	Cars 3	$ 383,889,151.00	$ 175,000,000.00	$ 208,889,151.00	$ 53,688,680.00	21,254,002	102	0	0	PG	Yes	Animation	Walt Disney Pictures
30	Baby Driver	$ 228,104,185.00	$ 34,000,000.00	$ 194,104,185.00	$ 20,553,320.00	14,620,884	112	3	0	R	No	Action	TriStar Productions
31	The Shape of Water	$ 194,349,972.00	$ 19,400,000.00	$ 174,949,972.00	$ 166,564.00	22,187,019	123	13	4	R	No	Drama	Fox Searchlight Pictures
32	Alien: Covenant	$ 240,891,763.00	$ 97,000,000.00	$ 143,891,763.00	$ 36,160,621.00	24,707,321	122	0	0	R	Yes	Sci-Fi	20th Century Fox
33	Three Billboards Outside Ebbing, Missouri	$ 157,880,842.00	$ 15,000,000.00	$ 142,880,842.00	$ 322,168.00	8,504,579	115	7	2	R	No	Comedy	Fox Searchlight Pictures
34	Pitch Perfect 3	$ 175,919,310.00	$ 45,000,000.00	$ 130,919,310.00	$ 19,928,525.00	12,293,367	93	0	0	PG-13	Yes	Musical	Universal Pictures
35	The Post	$ 174,496,433.00	$ 50,000,000.00	$ 124,496,433.00	$ 526,011.00	17,102,525	116	2	0	PG-13	No	Biography	Dreamworks
36	John Wick: Chapter 2	$ 158,216,655.00	$ 40,000,000.00	$ 118,216,655.00	$ 30,436,123.00	16,016,721	122	0	0	R	Yes	Action	Summit Entertainment
37	Darkest Hour	$ 145,843,120.00	$ 30,000,000.00	$ 115,843,120.00	$ 175,006.00	4,991,654	125	6	2	PG-13	No	Biography	Perfect World Pictures
38	Blade Runner 2049	$ 259,344,059.00	$ 150,000,000.00	$ 109,344,059.00	$ 32,753,122.00	27,477,953	164	5	2	R	Yes	Drama	Columbia Pictures
39	Baywatch	$ 176,928,652.00	$ 69,000,000.00	$ 107,928,652.00	$ 18,503,871.00	14,340,677	116	0	0	R	Yes	Action	Paramount Pictures
40	Lady Bird	$ 70,758,273.00	$ 10,000,000.00	$ 60,758,273.00	364,437	14,536,679	94	5	0	R	No	Comedy	Scott Rudin Productions
41	Victoria & Abdul	$ 65,421,267.00	$ 21,000,000.00	$ 44,421,267.00	$ 158,845.00	5,036,428	111	2	0	PG-13	No	Biography	BBC Films
42	I, Tonya	$ 53,939,297.00	$ 11,000,000.00	$ 42,939,297.00	$ 264,155.00	15,332,967	120	3	1	R	No	Biography	Clubhouse Pictures
43	The Big Sick	$ 44,328,624.00	$ 5,000,000.00	$ 39,328,624.00	$ 421,577.00	3,859,679	120	1	0	R	No	Comedy	Apatow Production
44	Call Me By Your Name	$ 40,353,565.00	$ 3,500,000.00	$ 36,853,565.00	$ 412,932.00	12,273,184	132	4	1	R	No	Drama	Frenesy Film Company
45	Fist Fight	$ 41,087,017.00	$ 22,000,000.00	$ 19,087,017.00	$ 12,201,873.00	5,208,174	91	0	0	R	No	Comedy	New Line Cinema
46	Mother!	$ 44,516,999.00	$ 33,000,000.00	$ 11,516,999.00	$ 7,534,673.00	15,884,611	121	0	0	R	No	Horror	Paramount Pictures
47	The Disaster Artist	$ 21,120,616.00	$ 10,000,000.00	$ 11,120,616.00	$ 1,211,345.00	11,182,256	104	1	0	R	No	Biography	New Line Cinema
48	Phantom Thread	$ 44,523,275.00	$ 35,000,000.00	$ 9,523,275.00	$ 216,495.00	10,386,240	130	6	1	R	No	Drama	Focus Features
49	American Made	$ 51,342,000.00	$ 50,000,000.00	$ 1,342,000.00	$ 272,892.00	12,386,342	115	0	0	R	No	Biography	Cross Creek Pictures
50	Marshall	$ 10,051,659.00	$ 12,000,000.00	$ (1,948,341.00)	$ 3,000,805.00	824,618	118	1	0	PG-13	No	Biography	Chestnut Ridge Productions
51	Downsizing	$ 38,716,619.00	$ 68,000,000.00	$ (29,283,381.00)	$ 4,954,287.00	10,331,054	135	0	0	R	No	Drama	Paramount Pictures

Figure 17: Raw Data Screenshot

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