THE DETERMINANTS OF DOMESTIC BOX OFFICE PERFORMANCE IN THE MOTION PICTURE INDUSTRY

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ABSTRACT

This paper examines the determinants of box office revenue in the motion picture industry. The sample consists of 505 films released during 2001-2003. Regression results indicate the primary determinants of box office earnings are critic reviews, award nominations, sequels, Motion Picture Association of America rating, budget, and release exposure. Specific results include the observation that a ten percent increase in critical approval garners an extra seven million dollars at the box office, an academy award nomination is worth six million dollars, the built in audience from sequels are worth eighteen million dollars, and R-rated movies are penalized twelve million dollars.

INTRODUCTION

The movie industry earns over eight billion dollars annually at the domestic box office and employs over 580,000 people in the areas of film production & services, theaters, and home video (Simonoff & Sparrow, 2000). A single movie can be the difference between millions of dollars of profits or losses for a studio in a given year. Film audiences make hits or flops and they do it, not be revealing preferences they already have, but by discovering what they like (DeVany & Walls, 1996). When they see a movie they like, they make a discovery and they tell their friends about it. Film critics can be viewed as friends that initially view movies for fans and play an integral role in the information cascade that generates a hit. The recent admission of using fabricated film reviews by Sony Pictures, 20th Century Fox, Artisan Entertainment, and Universal Pictures provides anecdotal evidence that industry executives believe that reviews and testimonials have an impact at the box office. In the most extreme case, Sony Pictures admitted to marketing fraud in 2001 by using an imaginary film critic to promote two new releases.

The purpose of this research is to analyze the motion picture industry with a focus on how box office performance is impacted by film reviewers, film classification (sequel, rating, and genre), industry awards, and historical fundamentals (budget and number of screens showing the film in wide release). This paper is divided into four sections. First, a survey of the related literature is discussed. The second section provides the model specification. This is followed by an empirical evaluation of the determinants of box office performance for 505 films released during 2001-2003. The final section offers concluding remarks.

SURVEY OF THE LITERATURE

Many researchers have developed models that explore the potential determinants of motion picture box office performance. Litman (1983) was the first to develop a multiple regression model in an attempt to predict the financial success of films. The original independent variables in the landmark work include movie genre (science fiction, drama, action-adventure, comedy, and musical), Motion Picture Association of America rating (G, PG, R and X), superstar in the cast, production costs, release company (major or independent), Academy Awards (nominations and winning in a major category), and release date (Christmas, Easter, summer). Litman's model provides evidence that the independent variables for production costs, critics' ratings, science fiction genre, major distributor, Christmas release, Academy Award nomination, and winning an Academy Award are all significant determinants of the success of a theatrical movie. Litman and Kohl (1989) and Litman and Ahn (1998) have replicated and expanded the initial work of Litman (1983).

One area of interest has been the role of the critic. The impact of the critic has been approached many ways yielding different results, although the majority of studies find that critics play a significant role on the success or failure of a film. Eliashberg and Shugan (1997) divide the critic into two roles, the influencer and the predictor. The influencer is a role where the critic will influence the box office results of a movie based on his or her review of the movie. Eliashberg and Shugan's results suggest that critics do have the ability to manipulate box office revenues based on their review of a movie. The predictor is a role where the critic, based on the review, predicts the success of a movie but the review will not necessarily have an impact on how well the movie performs at the box office. Eliashberg and Shugan show that the predictor role is possible but does not have the same statistical evidence as the influencer role.

Reinstein and Snyder (2000) focus on the critics Siskel and Ebert and how their reviews impact box office success. The authors report that the correlation between good movie reviews and high demand might be false due to unknown quality measurements. In order to circumvent the proposed false correlation Reinstein and Snyder apply a "differences in differences" approach that yields a conclusion that positive reviews have a surprisingly large and positive impact on box office revenue. Reinstein and Snyder also report that their results show that the power to influence consumer demand does not necessarily lie in the entire critic population, but may lie in the hands of a few critics.

Wallace, Seigerman, and Holbrook (1993) employ a sample of 1,687 movies released from 1956 through 1988 to investigate the relationships between movies box office success and critic ratings. They find a poorly rated movie will actually lose money for every positive review it receives while a highly rated movie will continue to gain money for every positive review it receives. Wallace, Seigerman, and Holbrook (1993, p. 11) interpret these findings by saying that "it appears that a bad movie has something to gain by being as trashy as possible. … [For] a good movie, it apparently pays to strive for even greater excellence." Ravid (1999) has also looked at movie reviews as a source of projecting higher revenues. He concludes that the more reviews a film receive, positive or negative, the higher revenues it will obtain.

Although much research has shown that the critic is a positive indicator of box office success others have shown that the critic plays a much less important role.

Levene (1992) surveyed students at the University of Pennsylvania and concludes from her 208 useable surveys that positive critic reviews ranked tenth, behind plot, subject, and word-of-mouth on a list of factors that influence the decision to watch a film. Levene's study reveals that theatre trailers and television advertising were the two most important determinants. Faber and O'Guinn (1984) conclude that film advertising, word-of-mouth and critics' reviews are not important compared to the effect that movie previews and movie excerpts have on the movie going public. Wyatt and Badger (1984) find that negative or positive reviews have little effect on the interest of an individual to see a movie over a mixed review or seeing no review. Further research by Wyatt and Badger (1987) conclude that positive reviews and reviews that contain no evaluative adjectives, which they called non-reviews, are deemed more interesting than a review that was negative or mixed. More recently, Wyatt and Badger (1990) report that reviews containing high information content about a movie raise more interest in a film than a positive review.

Research has shown a seasonal pattern in movie releases and box office performance. Litman (1983) reports that the most important time for a movie release is during the Christmas season. Sochay (1994) counters this with evidence that the summer months are the optimal time of year to release a motion picture. Sochay, referencing Litman (1983), explains his conflicting results are due to competition during the peak times. Sochay adds that the successful season will shift from the summer to Christmas in different years due to film distributors avoiding strong competition. Radas and Shugan (1998) developed a model that captures the seasonality of the motion picture industry and apply it to the release of thirty-one movies. The authors find that the length of a movie release on average is not longer during the peak season but peak season movies typically perform better at the box office. Einav (2001) investigates seasonality in underlying demand for movies and seasonal variation in the quality of movies. He finds that peak periods are in the summer months and the Christmas season because distributors think that is when the public wants to see movies and when the best movies are released. He comments that distributors could make more money by releasing "higher quality" movies during non-peak times because the movie quality will build the audience and there will be less competition than at peak times.

Film ratings passed down from the Motion Picture Association of America (MPAA) may also influence box office performance. Many film companies fight for a better rating, often re-shooting or re-editing scenes multiple times in order to get their preferred rating, most often being PG or PG-13 because these ratings exclude virtually no one from seeing the movie. Sawhney and Eliashberg (1996) develop a model where the customer's decision-making process on whether to see a movie can be broken into a two-step approach, time-to-decide and time-to-act. The results of their study show that movies with an MPAA rating of restricted (rated R) perform worse at the box office than movies without a restricted rating. The analysis shows that restricted rated movies have a higher time-to-act but have longer time-to-decide periods than family movies. Ravid (1999) provides evidence from a linear regression model that G and PG rated films have a positive impact on the financial success of a film. Litman (1983) on the other hand, finds that film ratings are not a significant predictor of financial success. Austin (1984) and Austin and Gordon (1987) also look at film ratings in an attempt to find a correlation between ratings and movie attendance but find no significant relationship.

Anast (1967) was the first to look at film genre and how it relates to film attendance. His results show that action-adventure films produce a negative correlation with film attendance while films containing violence and eroticism had a positive correlation. Litman (1983) shows that the only significant movie genre is science fiction. Sawnhey and Eliashberg (1996) use their two-step approach and find that the drama genre has a slower time-to-act parameter while action movies result in a faster time-to-decide than other movie genres. Neelamegham and Chinatagunta (1999) employ a Bayesian model to predict movie attendance domestically and internationally. They find that across countries the thriller genre is the most popular, while romance genre was the least popular.

Awards are important to every industry but few industries experience financial compensation from an award more than the motion picture industry. Litman (1983) shows that an Academy Award nomination in the categories of best actor, best actress, and best picture is worth $7.34 million, while winning a major category Academy Award is worth over $16 million to a motion picture. Smith and Smith (1986) point out that the power of the Academy Award explanatory variable in models explaining patterns in movie rentals will change over time as the effects of different Academy Awards could cause both positive and negative financial results to a movie in different time periods. Nelson, Donihue, Waldman, and Wheaton (2001) estimate that an Academy Award nomination in a major category could add as much as $4.8 million to box office revenue, while a victory can add up to $12 million. The authors find strong evidence toward the industry practice of delaying film releases until late in the year as it improves the chances of receiving nominations and monetary rewards. Dodds and Holbrook (1988) look at the impact of an Academy Award after the nominations have been announced and after the award ceremony. The authors find that a nomination for best actor is worth about $6.5 million, best actress is worth $7 million and best picture is worth $7.9 million. After the award ceremony the best actor award is worth $8.3 million, best picture is worth $27 million, and best actress award is not statistically significant. Simonoff and Sparrow (2000) find that for a movie opening on less than ten screens an Academy Award nomination will increase the movies expected gross close to 250% more than it would have grossed if it had not received the nomination. For movies opening on more than ten screens, an Academy Award nomination will increase the movies gross by nearly 30%.

DATA AND MODEL

Predicting the performance of new feature films is widely regarded as a difficult endeavor. Each film has a dual nature, in that it is both an artistic statement and a commercial product (Sochay, 1994). Knowing what factors and conditions affect the performance of theatrical movies is of great value for the eight billion dollar a year industry. Many studies have attempted to estimate the determinants of box office performance by employing empirical models to a limited number of high profile features. The approach of this study is unique because the data set is derived from a cross section of all movies released in the years 2001, 2002, and 2003 that opened in twenty-five or more theatres or eventually reached an audience at one hundred theaters or more. Less than eighty movies in the universal sample for 2001-

2003 did not meet the criteria of opening in twenty-five or more theatres or reaching one hundred or more theaters. A total of 505 motion pictures are in the final sample.

The primary source of data for this study is the Rotten Tomatoes website (rottentomatoes.com). The website is a unique rating system that summarizes positive or negative reviews of accredited film critics into an easy to use total percentage that is aggregated for each motion picture. In addition to providing a system of aggregate reviews, the website also contains information pertaining to revenue, release date, movie rating, genre, and number of screens featuring a film each week of release. WorldwideBoxoffice.com, Movies.com, and the-numbers.com are three additional sources of data and information.

The empirical model employed to investigate the determinants of box office performance for this study is specified below as:

$$(1)\ REVENUE_i = B_0 + B_1 CRITIC_i + B_2 HOLIDAY_i + B_3 ADULT_i + B_4 SEQUEL_i + B_5 ACTION_i + B_6 CHILDREN_i + B_7 AWARD_i + B_8 RELEASE_i + B_9 BUDGET_i + u_i,$$

where REVENUE is domestic gross box office earnings, CRITIC is the percent approval rating for a film by an agglomeration of film critics, HOLIDAY is a categorical variable representing movie releases around a major holiday (Memorial Day, Independence Day, Thanksgiving, Christmas, and New Year's), ADULT is a categorical variable for movies with a restricted rating (Rated R), SEQUEL is a categorical variable for movies that are derived from a previously released film, ACTION is a categorical variable for movies in the genre of action/adventure, CHILDREN is a categorical variable for movies in the genre of children's movie, AWARDS is the number of Academy Award nominations a film receives, and RELEASE is the number of theaters showing the film during the week of wide release. BUDGET controls for the estimated production and promotion costs for each movie. Several alternative model specifications were considered including control variables for independent films, presence of an established star actor or director, winning an Academy Award, and new release competition. Inclusion of these variables into the model affected the standard errors of the coefficients but not the value of the remaining coefficients or they suffer from excessive multicollinearity with variables included in the model. For these reasons they are not included in the final model.

Descriptive statistics for the model variables are presented in Table 1. Average movie revenue in the sample is $46 million, with a maximum of $404 million (Spider-Man) and a minimum of $109 thousand (Waking up in Reno). Average critical rating of the movies in the research cohort is approximately 50 percent (49.85) with a standard deviation of 27 percent. Twenty-four percent of the movies in the sample are holiday releases, 31 percent have a restricted rating, 12 percent are sequels, 18 percent are action films, and 11 percent target children. The maximum number of Academy Award nominations is 13 (Chicago). The average release for movies in the sample reached 1,783 theaters during the week of wide release, with a maximum of 3,782 theatres and a minimum of 25 theaters (the minimum allowed in order to be included in the data set). The budget for movies in the research sample varies from a low of $150 thousand (Tadpole) to a high of $170 million (Terminator 3: The Rise of the Machines).

Table 1
Summary Statistics: Domestic Box Office Revenue (2001-2003)

Variable	Mean	Maximum	Minimum	Standard Dev.
REVENUE	46,099,483	403,706,000	109,000	51,263,335
CRITIC	49.85	97	0	27.23
HOLIDAY	0.24	1	0	0.40
ADULT	0.31	1	0	0.35
SEQUEL	0.12	1	0	0.31
ACTION	0.18	1	0	0.36
CHILDREN	0.11	1	0	0.29
AWARD	0.46	13	0	1.65
RELEASE	1,783.12	3,782	25	1,165.41
BUDGET	21,086,591	170,000,000	150,000	22,891,043

DETERMINANTS OF BOX OFFICE REVENUE

The estimated empirical relationship between the explanatory variables and domestic box office revenue is presented in Table 2. Two model specifications are presented. The first is a parsimonious linear specification offering easy to interpret coefficients. The second employs a semi-log form (the dependent variable REVENUE is transformed into log form) correcting for obvious outliers that exist in the sample because of box office blockbusters. The results of the two empirical models are extremely consistent. The linear model explains seventy percent of the variance in box office earnings, while the semi-log model explains seventy-one percent. None of the independent variables have a correlation higher than 0.47 (Budget and Sequel have the highest correlation), suggesting that excessive multicollinearity is not a problem in the analysis. Six of the nine independent variables are statistically significant in both the linear and semi-log model specifications.

The first variable in the model is the percent approval rating for a film by a leading group of movie critics (CRITIC). Conventional wisdom suggest that critical reviews are extremely important to the popularity of movies, especially in the early stages of a release before word-of-mouth reaction can take over. Good reviews are expected to stir curiosity and identify quality, while poor reviews are expected to limit the interest of the influential early adopters. More practically speaking, the advertising agency will select favorable excerpts from reviews and incorporate them in its media campaign to give the impression of critical acclaim (Litman, 1983). The creation of a fake movie critic (David Manning) to positively review releases from

Table 2
Determinants of Domestic Box Office Revenue (2001-2003)

Variable	Linear Model Coefficient (t-statistic)	Semi-log Model Coefficient (t-statistic)
Intercept	-24,212,192.71 (-5.95)*	11.2032 (87.15)*
CRITIC	702,699.83 (7.09)*	0.0213 (8.59)*
HOLIDAY	1,083,223.81 (0.24)	0.0117 (0.32)
ADULT	-12,548,346.32 (-2.84)*	-0.197 (-2.08)*
SEQUEL	18,325,022.64 (3.31)*	0.3129 (2.03)*
ACTION	3,527,776,39 (0.79)	-0.0321 (-0.27)
CHILDREN	9,569,731.43 (1.61)	-0.2097 (-1.80)
AWARD	6,277,333.41 (3.09)*	0.2031 (6.41)*
RELEASE	23,534.67 (6.49)*	0.0020 (19.62)*
BUDGET	2.927 (12.94)*	2.32E-09 (2.21)*
Adj. R-square	0.7036	0.7137
F-value	103.09*	106.52*

Notes: *p<.05 and n = 505.

Sony Pictures implies that industry insiders believe the movie critic is important to box office success. Consistent with the literature, Table 2 shows the CRITIC variable is positive and statistically significant in both model specifications. The coefficient in the linear model implies that a ten percent increase in critic approval of a motion picture will add over $7 million to box office revenue. Movies earning critical acclaim appear to profit from the information cascade put forth by the positive word-of-mouth. High-profile movies in the sample with high approval ratings include Road to Perdition (82 rating, grossing $104 million), Spider-Man (88 rating, grossing $404 million), and Chicago (87 rating, grossing $187 million). In addition, negative reviews can be viewed as box office poison. High-profile movies with low critical ratings include Pluto Nash (6 rating, grossing $4 million), Original Sin (13 rating, grossing $16 million), and Analyze That (29 rating, $32 million). Of course, there are exceptions to the rule and some movies with critical praise like Adaptation (91 rating,

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grossing $21 million) and Monsters Ball (84 rating, grossing $31 million) struggle at the box office while others films panned by the critics like Tomb Raider (18 rating, grossing $131 million) and Pearl Harbor (24 rating, grossing $198 million) find box office gold. Studios and distributors with negative critical reviews appear to be served well by cutting their losses with a limited advertising campaign and following an expeditious path to home video. It should be noted that although this section shows that critical praise is highly correlated with box office performance, the role of the film critic might be more of a predictor than an agent that influences movie revenues. If the film critic is a predictor then she is merely a leading indicator with no significant influence on actual box office revenue (Eliashberg & Shugan, 1997). From this perspective, critics merely represent their audiences; they predict ultimate success but have little influence. Although reviews themselves could influence some moviegoers, the reviews primarily produce valuable predictive information about the ultimate success or failure of a film based on quality. On the other hand, a critic could be an opinion leader or influencer (Weiman, 1991). An opinion leader or influencer is a person who is regarded by other people as having expertise and knowledge on a particular subject. Under this perspective, early critics' reviews can make or break a motion picture opening. Many studios and distributors assume critics are influencers and attempt to persuade critics to be favorable. Ultimately, the film critic probably plays a dual role of both predictor and influencer.

The release date of a motion picture is widely regarded as an important decision. The distribution of movie attendance is not uniform throughout the year but believed to be bunched around major holidays. The HOLIDAY variable in this study controls for movies released within 7 days of Memorial Day, Independence Day, Thanksgiving, Christmas, and the New Year's holiday. Surprisingly, the HOLIDAY variable is not statistically significant in either model specifications. The Christmas and New Years holiday season is widely recognized as the most active time of year followed by the summer season with peaks around Memorial Day and Independence Day. One possible explanation for the unanticipated result is that several blockbuster movies released during the research timeframe opened a few weeks before the traditional holiday season. More than forty motions pictures in the research sample released outside the holiday season earned $100 million or more in domestic revenue. The list includes Spider-Man ($404 million, May 3rd release), Monsters Inc. ($256 million, November 2nd), My Big Fat Greek Wedding ($241 million, April 19th release), and Signs (228 million, August 2nd release). Many films appears to have strategically been released at a time that would avoid direct competition with obvious blockbusters like the Lord of the Ring movies, Star Wars Episode 2, and Men in Black 2. The negative coefficient on the HOLIDAY variable might also be explained by the CRITIC variable correcting for quality assuming the Einav (2001) proposition that holiday releases perform better at the box office because studios offer higher quality during peak times of the year.

Another element considered to factor into the box office performance of a film is the rating assigned by the Motion Picture Association of America. The motion picture industry established the code as a means of giving advance information to parents and others about the theme and treatment of films. This voluntary code was adopted to prevent stringent forms of governmental controls. There are four possible ratings given to films in the research sample—G (general audiences), PG (parental guidance suggested), PG-13 (possibly unsuitable for children less than 13 years of

age), and R (restricted; children not admitted unless accompanied by an adult). The conventional wisdom is that family product sells, while an adult theme or treatment has a limited customer base because of age restrictions preventing access to the lucrative teenage market. This hypothesis is verified by the negative and statistically significant coefficient associated with the ADULT variable in both model specifications. The linear model specification has a negative coefficient larger than $12 million dollars. Based on the empirical results it is not surprising that today many motion picture companies push the envelope at the PG-13 rating but edit content as needed to avoid the restricted rating. Of the top twenty films released in 2002, not one was rated R. The Eminem movie 8 Mile was the top grossing R rated movie, just missing the top twenty at number twenty-one grossing $117 million. The Matrix sequels of 2003 both grossed well over $100 million each despite an R-rating but this appears to be a rare exception that is probably driven by fan anticipation derived from the popularity of the first Matrix film.

The movie sequel has been around for many years but the 2001-2003 years are truly dominated at the box office by the sequel. A total of sixty-one sequels are offered, with twenty-two breaking the $100 million mark at the box office. Despite a copious amount of research on the determinants of box office performance, few authors have included a categorical variable for sequel. The primary reason the motion picture industry produces the sequel is because of the perceived existence of an audience for a sequel to a popular film. There are no guarantees in the motion picture industry but the positive relationship between moviegoers and a specific storyline and characters is as close at it gets. The SEQUEL variable is defined in this study as a movie derived from previous released material (e.g., sequel, prequel, or remake). Table 1 indicates that the variable has a positive and statistically significant impact on box office revenue. The linear specification yields a coefficient approximately equal to $36 million. The success of the sequel in the research sample includes several blockbusters like the Lord of the Rings sequels (grossing $339 million and $377 million), Star Wars Episode 2 (grossing $310 million), the Matrix sequels (grossing $281 and $139 million), Harry Potter 2 (grossing $262 million), Rush Hour 2 (grossing $226 million), Goldmember (grossing $213 million), and The Mummy Returns (grossing $202 million). Even sequels that performed well below expectations like Crocodile Dundee in LA (grossing $26 million), Friday After Next (grossing $33 million), Analyze That (grossing $32 million), and Star Trek: Nemesis (grossing $43 million), appear to have a limited audience that prevents the sequel from being a complete box office disaster. The sequel appears to be a major player in the current world of motion pictures and should clearly be included as a determinant of box office performance in future research.

One commonly used, yet rarely found to be significant contributor to box office success is the content category (Litman, 1983; Litman & Kohl, 1989; Sochay, 1994). Two variables are used to control for content or type of genre in this study. They are ACTION and CHILDREN. The variables are included in the model based on the general observation that action movies like Lord of the Rings (all three episodes grossing over $300 million) and children's movies like Shrek (grossing $268 million) are some of the most successful motion pictures in the research sample. The empirical results indicate that action movies pack a punch but children's films are becoming ubiquitous. The action genre is positive in both model specifications and statistically significant in the linear model with a coefficient slightly over $16 million. The success of blockbusters like Harry Potter (grossing over $318 million) and

Monsters Inc. (grossing $256 million) makes it somewhat surprising to find that in both model specifications the CHILDREN variable is negative. The 2001-2003 sample contains over fifty children's movies. Although it is clear that some of the highest grossing films are derived from the children's genre it also appears that the market is saturated with many box office failures.

The independent variable AWARD measures the number of Academy Award nominations garnered by a motion picture. Fifty-seven of the films in the research sample received one or more academy award nominations, lead by the movie Chicago (grossing $171 million) with thirteen total nominations. It is widely believed that films that receive an Oscar nomination possess what Rosen (1981) describes as the elusive quality of box office appeal, the ability to attract an audience and generate a large volume of transactions. An Oscar nomination serves as a signaling device, indicating which films are viewed by industry experts as being worthy of recognition. According to the model, an Academy Award nomination is worth more than $6 million dollars per nomination. Given the financial return to Academy Award nominations, it is not surprising that each of the major distributors spend a large amount on advertising and campaigning effort in order to court the favor of members of the Academy. It should be noted that an alternative specification employing a variable controlling for winning an Oscar was explored by the authors but found to be statistically insignificant.

The last two variables in Table 2 are RELEASE and BUDGET. Previous research shows a close correlations between a movies' financial success and the number of screens on which the movie is shown during its initial launch (Einav, 2001). The opening weekend of a movie release typically accounts for twenty-five percent of the total domestic box office gross (Simonoff & Sparrow, 2000). Obviously, a movie must be available in numerous markets in order to achieve box office success. In addition, the RELEASE variable is highly correlated (negative correlation of .76) with movies released by independent film companies, resulting in a deletion of the independent film variable from the model in order to avoid excessive multicollinearity. The results from Table 2 show that the RELEASE variable is positive and statistically significant in both the linear and semi-log model specifications. Hence, movies with a wide release have a greater propensity for box office success. The success can easily be explained by the fact that a wide release has an easier time finding an audience and is probably a product of one of the major motion picture studios with access to proper marketing channels and box office movie stars like Tom Cruise and Julia Roberts or a box office franchise like the Star Wars saga. The BUDGET variable is positive and statistically significant in both models. Big budget movies with high profile movie stars, expensive sets and special effects, and large advertising budgets have an obvious advantage drawing crowds at the box office.

CONCLUSION

Nobody knows with any certainty what makes a hit movie. Employing a multiple regression statistical model, many variables commonly believed to impact the box office success of movies are evaluated in this study. One of the more interesting results is the positive and statistically significant impact positive critical acclaim has on the financial performance of a film. A ten percent increase in critic

approval adds approximately $7 million to box office revenue, while an Academy Award nomination is valued at $6 million dollars per nomination. Movie sequels, production budget, and the number of theaters showing the film during wide release all have a positive and statistically significant impact on box office performance. Adult content movies with a MPAA restricted rating have a negative impact on box office performance for the years 2001-2003. The penalty associated with a restricted rating is more than $12.5 million. One avenue for future research is to expand financial success beyond the role of the domestic box office by focusing on world-wide box office performance. A second research extension is to expand the domestic box office performance to include additional revenues generated from video sales, rentals, merchandise, pay-per-view, cable television, and network television.

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