

Question 1- Movie Profitability

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Abstract

This paper attempts to investigate the claims made by one of the authors school friends, at a braai, that reviews by movie critics are near perfect predictors of movies' popularity and profitability among moviegoers.

Introduction

This paper attempts to address three statements, posited by a friend at a braai. The first relates to the review platform 'Rotten Tomatoes', which is claimed to be a consistently good review platform. Secondly Disney is the most profitable lead studio, and finally whether audiences are drawn to the highest grossing films.

Summary Statistics

The dataset used to investigate the above claims is sourced from an associate at Mr Video, and contains info on movie critic and grossing data; with 74 observations in 8 variables. In our sample, the two most common genres are comedies and romances, which are 55% and 20.3%, respectively, of the sample movies. The average audience score is 64, the lowest score is 35, and the highest score is 89. Whereas the mean, lowest, and highest Rotten Tomatoes scores are 47.36, 3, and 96. The summary statistics can be found below, and although some aspects are not intuitivte, they provide a snapshot of the data.

```
## df_mov
##
## 8 Variables      74 Observations
## -----
## Film
##      n missing distinct
##      74      0      74
##
## lowest : (500) Days of Summer      27 Dresses      A Dangerous Method
## highest: What Happens in Vegas      When in Rome      You Will Meet a Tall
## -----
## Genre
##      n missing distinct
##      74      0      6
##
## lowest : Action      Animation Comedy      Drama      Fantasy
## highest: Animation Comedy      Drama      Fantasy      Romance
##
## Value      Action Animation      Comedy      Drama      Fantasy      Romance
## Frequency      1      3      41      13      1      15
## Proportion      0.014      0.041      0.554      0.176      0.014      0.203
## -----
## Lead.Studio
##      n missing distinct
##      73      1      13
```

```

##
## lowest : 20th Century Fox      CBS      Disney      Fox      Ind
## highest: Sony      Summit      The Weinstein Company Universal      War
##
## 20th Century Fox (2, 0.027), CBS (1, 0.014), Disney (7, 0.096), Fox (6, 0.082),
## Independent (19, 0.260), Lionsgate (2, 0.027), New Line (1, 0.014), Paramount
## (4, 0.055), Sony (4, 0.055), Summit (5, 0.068), The Weinstein Company (3,
## 0.041), Universal (7, 0.096), Warner Bros. (12, 0.164)
## -----
## Audience..score..
##      n missing distinct      Info      Mean      Gmd      .05      .10
##      73      1      40      0.999      64.14      15.81      44.6      47.0
##      .25      .50      .75      .90      .95
##      52.0      64.0      76.0      82.0      84.0
##
## lowest : 35 40 41 44 45, highest: 82 83 84 88 89
## -----
## Profitability
##      n missing distinct      Info      Mean      Gmd      .05      .10
##      71      3      71      1      4.742      5.009      0.7392      1.2453
##      .25      .50      .75      .90      .95
##      1.7907      2.6424      4.8510      8.0960      10.6349
##
## lowest : 0.0050000 0.2528949 0.4486447 0.6526032 0.8258000
## highest: 10.1800270 11.0897415 14.1964000 22.9131365 66.9340000
## -----
## Rotten.Tomatoes..
##      n missing distinct      Info      Mean      Gmd      .05      .10
##      73      1      49      0.999      47.36      30.34      9.8      14.2
##      .25      .50      .75      .90      .95
##      27.0      45.0      65.0      86.6      89.8
##
## lowest : 3 6 8 11 13, highest: 87 89 91 93 96
## -----
## Worldwide.Gross
##      n missing distinct      Info      Mean      Gmd      .05      .10
##      74      0      74      1      136.4      151.8      13.05      19.76
##      .25      .50      .75      .90      .95
##      32.45      73.20      190.19      332.75      452.36
##
## lowest : 0.025000 8.258000 8.972895 10.700000 14.310000
## highest: 415.253258 521.283432 609.473955 702.170000 709.820000
## -----
## Year
##      n missing distinct      Info      Mean      Gmd
##      74      0      5      0.953      2009      1.536
##
## lowest : 2007 2008 2009 2010 2011, highest: 2007 2008 2009 2010 2011
##
## Value      2007      2008      2009      2010      2011
## Frequency      11      19      12      19      13
## Proportion 0.149 0.257 0.162 0.257 0.176
## -----

```

Comparing Rotten Tomatoes Reviews & Audience Reviews

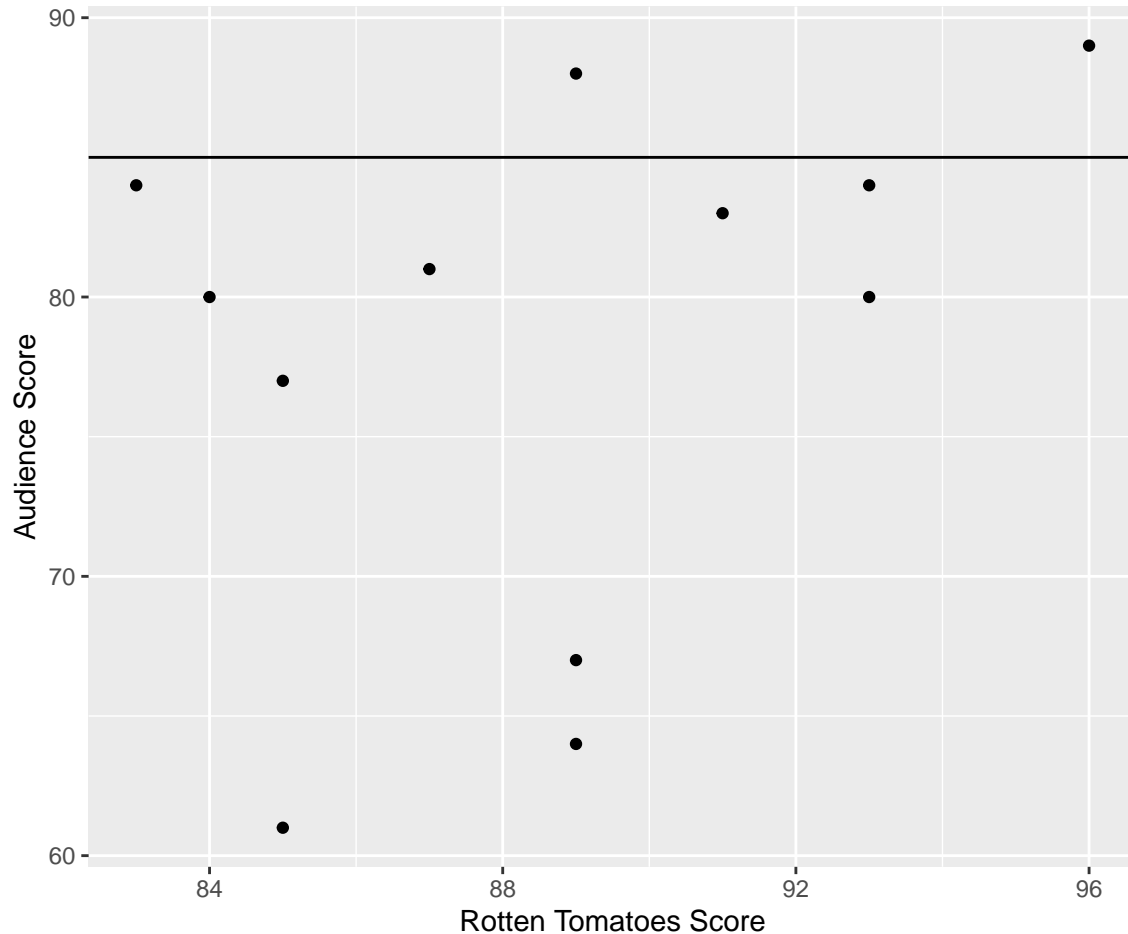


Figure 1: Comparing Rotten Tomatoes & Audience Scores

As we can see from Figure 1, a Rotten Tomatoes Score > 80 , does not imply that audiences will always give the movie a rating > 85 . In fact, most movies with a RT score > 80 , have audience scores less than 85.

Disney Films Profitability

In order to...

As we can see from Figure 2, Disney is not the most profitable of all leading studios. In fact, independent studios appear to be the most profitable of all lead studios. This may be because they have lower costs of making movies, relative to bigger studios, who although make more gross revenue from movies, also have much higher costs.

Audiences Attraction to High Grossing Films

In order to...

As can be seen from Figure 3, there is a significant positive correlation between a movies worldwide gross and the score an audience gives it.

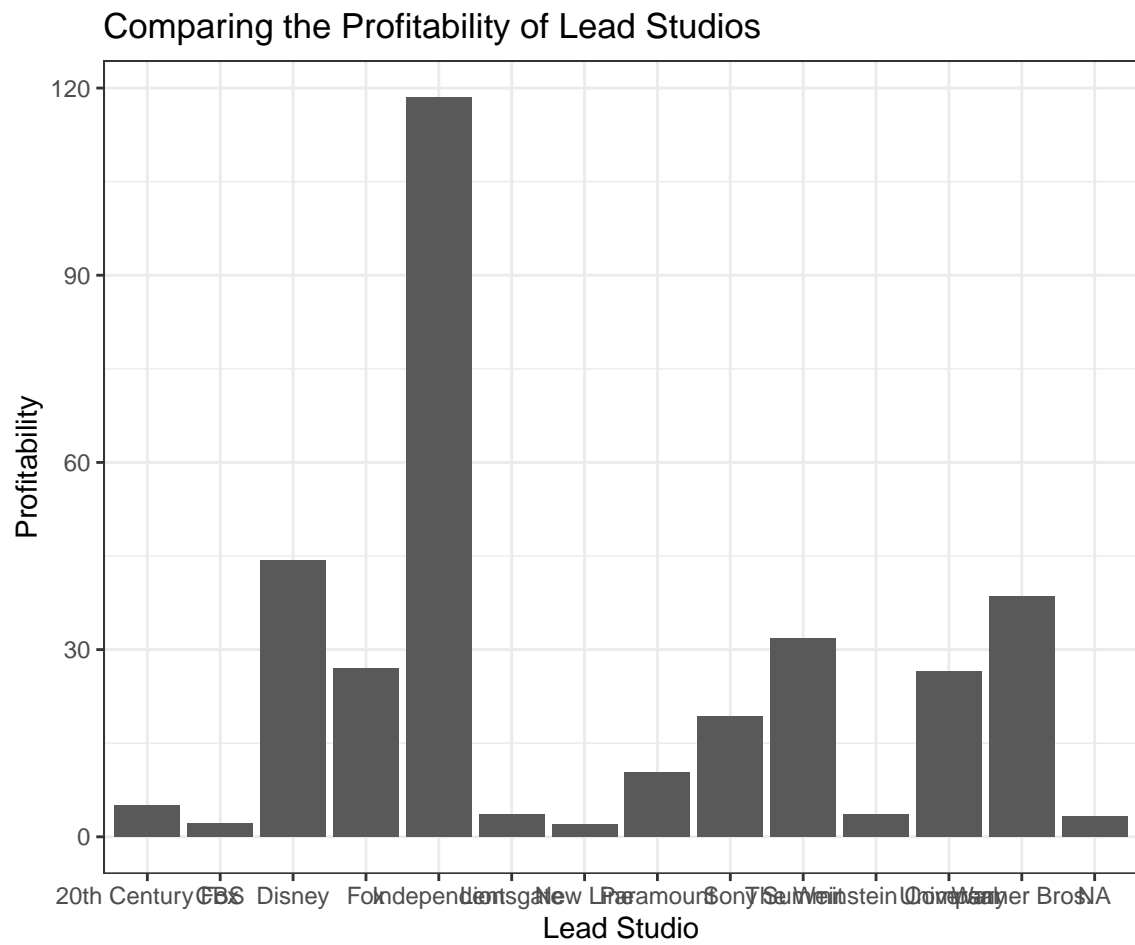


Figure 2: Comparing the Profitability of Lead Studios

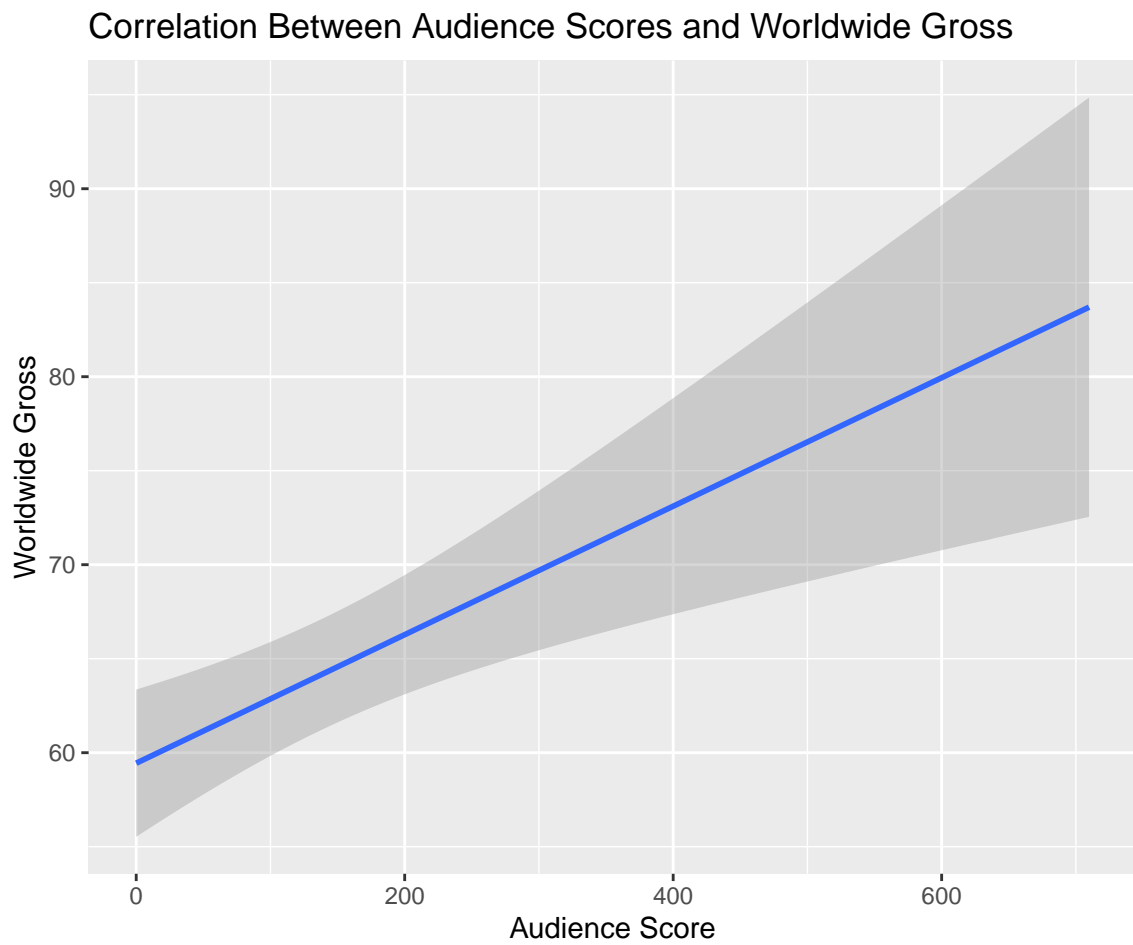


Figure 3: Correlation Between Audience Scores and Worldwide Gross