

# [Profit](https://assignbuster.com/profit/)

I will investigate the relationship between the Budget used to make a movie and the Gross Profit received according to the data of 50 American movies. The website http://www. the-numbers. com/movies/records/budgets. php displays further information on movie budgets and profits. It also states that numbers of movie profits can be both difficult to find and unreliable, as studios can keep the information a secret in order to make the movie seem more profitable, so it is important to know that with data of this kind, the reliability is always questionable.

I have chosen to investigate this relationship because it seems to be relatively strong in comparison to the rest, so I have more material to discuss and relate to outside situations. Later I will compare this relationship with different genres of movies and see if they follow a similar or different trend. The scatter graph shows a positive relationship between the amount of money spent to produce a movie and the gross amount of money it makes in the US. It follows that the more money one spends on a movie in the US, the bigger is their profit. This is expected.

The strength of this relationship is moderately good. Linear| Profit(y) = 2. 14Budget(x) + 102. 74Correlation = 0. 68| Quadratic| Profit(y) = 2. 39Budget(x) + 0Budget(x)^2 + 98. 8 | Cubic – Visual balance of scatter| Profit(y) = 7. 11Budget(x) -0. 07Budget(x)^2 + 0Budget(x)^3 + 55. 86| Randomly selected number between 0M and 500M Budget (millions of dollars)| Calculation (cubic model)| Profit (millions of dollars)| 58| 7. 11 X 58 – (58)^2 + 0 X (58)^3 + 55. 86| | 105| 7. 11 X 58 – (105)^2 + 0 X (105)^3 + 55. 86| | 283| 7. 11 X 58 – (283)^2 + 0 X (283)^3 + 55. 86| |