Assignment 5

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Similar to what we have discussed in the class, I construct a maximum score estimator for mergers and acquisitions in the ratio station market. The model measures the determinants of mergers in this market by maximize the sum of score estimator. In total, I have 2421 unique inequalities each of which compare the payoff of two actual deals with that of two counter-factual deals. If the former value is larger than the latter one, the estimator will add one. In order to construct this dataset, I separate the buyer and target information by years, and use a nested loop to calculate the payoffs of all both actual and counterfactual deals. I then use a conditional statement to do the comparison. Please see more details in the .py file.

A positive coefficient of a variable suggests this variable leads to more mergers with while a negative one suggests the opposite. Unfortunately, the Nelder-Mead method did not work for me. The optimal results were successfully obtained but they were just my initial guesses. Other optimizers may do a better job which I have tried but failed.