

Problem Set 4

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1 Part I

The MSE function is

$$\min Q(\alpha, \beta) = \sum_{i=1}^2 \sum_{j=1}^{a[i]-1} \sum_{k=j+1}^{a[i]} 1[f(b, t|\alpha, \beta) + f(b', t'|\alpha, \beta) - f(b', t|\alpha, \beta) - f(b, t'|\alpha, \beta)] \quad (1)$$

Here $a[i]$ stands for number of observations in year i , like 45 in year 2007 and 54 in year 2008. The results for α is 0.5769. If buyer is owned by corporate and population in range of target increases by 1, the payoff to the merger increases by 0.5769 keeping other variables constant. The results for β is 0.2576. If the distance between buyer and target increases by 1 mile, the payoff to the merger increases by 0.2576 keeping other variables constant.

2 Part II

The MSE function is

$$\min Q(\sigma, \alpha, \gamma, \beta) = \sum_{i=1}^2 \sum_{j=1}^{a[i]-1} \sum_{k=j+1}^{a[i]} 1[f(b, t|\sigma, \alpha, \gamma, \beta) - f(b, t'|\sigma, \alpha, \gamma, \beta) - p_{bt} + p_{bt'} + f(b', t'|\sigma, \alpha, \gamma, \beta) - f(b', t|\sigma, \alpha, \gamma, \beta) - p_{b't'} + p_{bt}] \quad (2)$$

The results for σ is 0.2785. If multiplier of number of stations owned by the parent and population in range of target increases by 1, the payoff to the merger increases by 0.2785 keeping other variables constant. The results for γ is 0.8799. If the HHI of target increases by 1, the payoff to the merger increases by 0.8799 keeping other variables constant. The results for α is -0.7787. If buyer is owned by corporate and population in range of target increases by 1, the payoff to the merger increases by -0.7787 keeping other variables constant. The results for β is 0.0821. If the distance between buyer and target increases by 1 mile, the payoff to the merger increases by 0.0821 keeping other variables constant.