Marketing Analytics Homework Assignment 1

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Link for the Python Notebook:

Write-up for Question 7:

Given the results, we are confident that launching the campaign in Georgia, Ohio, and Virginia states will bring us profit, and Georgia will bring the most among all three states. The average treatment effect shows that the profit will be $ 9,951,000, where GA brings the most profit ($5,895,004), followed by OH ($3,203,503), and VA ($851,611). However, according to the difference in difference estimate, even though the expected profit assuming parallel trend is $ 693,000, we are 95% confident that the profit will fall between $ -3,681,600 and $ 5,067,000, which include negative profit. Still, the result is based on the parallel trend assumption, and the expected profit is still above 0.