

Analysis of the Test on the Measure Sum\_Gross Margin

Test Start Date: 2015-02-06  
Test End Date: 2016-07-22  
Additional Information:

Test Summary

The average percentage change in Sum\_Gross Margin was -0.8% for the treatment units in the test period relative to the comparison period. This same measure was 4.8% for the control units, with the difference between the treatment and control units being -5.6%, which is highly statistically significant. More detailed summary statistics for the treatment and control groups are contained in the first table (which immediately follows), while the details of the hypothesis test of a significant difference in the mean average percentage change in Sum\_Gross Margin is contained in a table at the end of this report.

A comparison of the treatment-control pairs indicates an average lift in Sum\_Gross Margin for the treatment units over the control units of -5.2%, which results in an expected impact of -89 on Sum\_Gross Margin, with 20.3% of the treatment-control pairs exhibiting a positive lift for the treatment units.

Lift Analysis for Sum\_Gross Margin

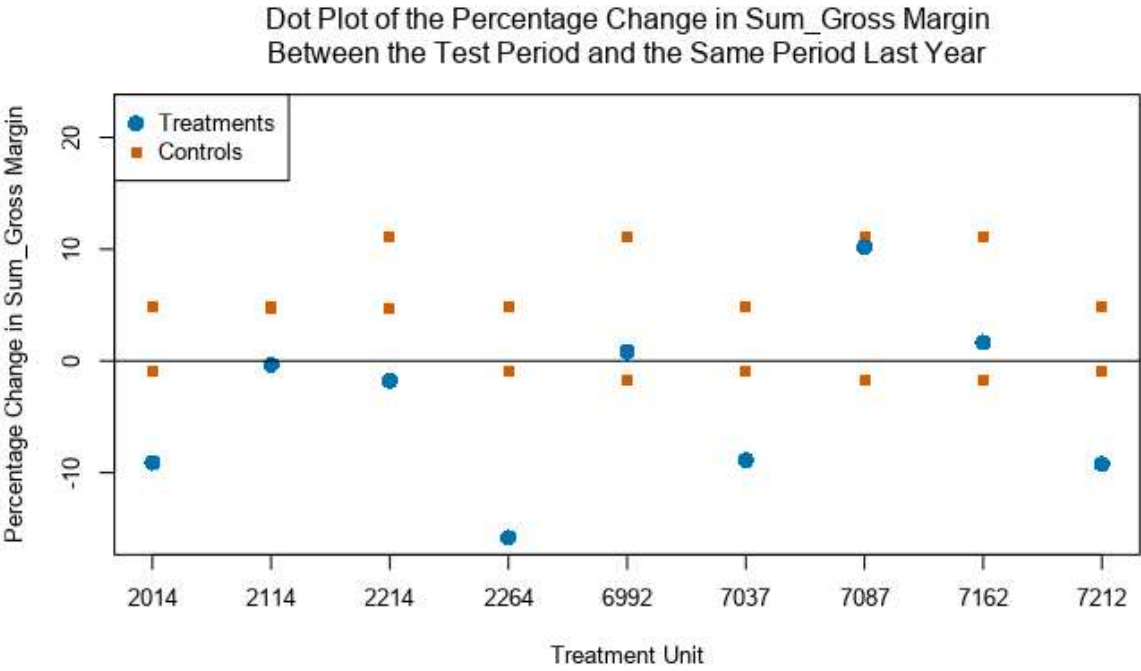
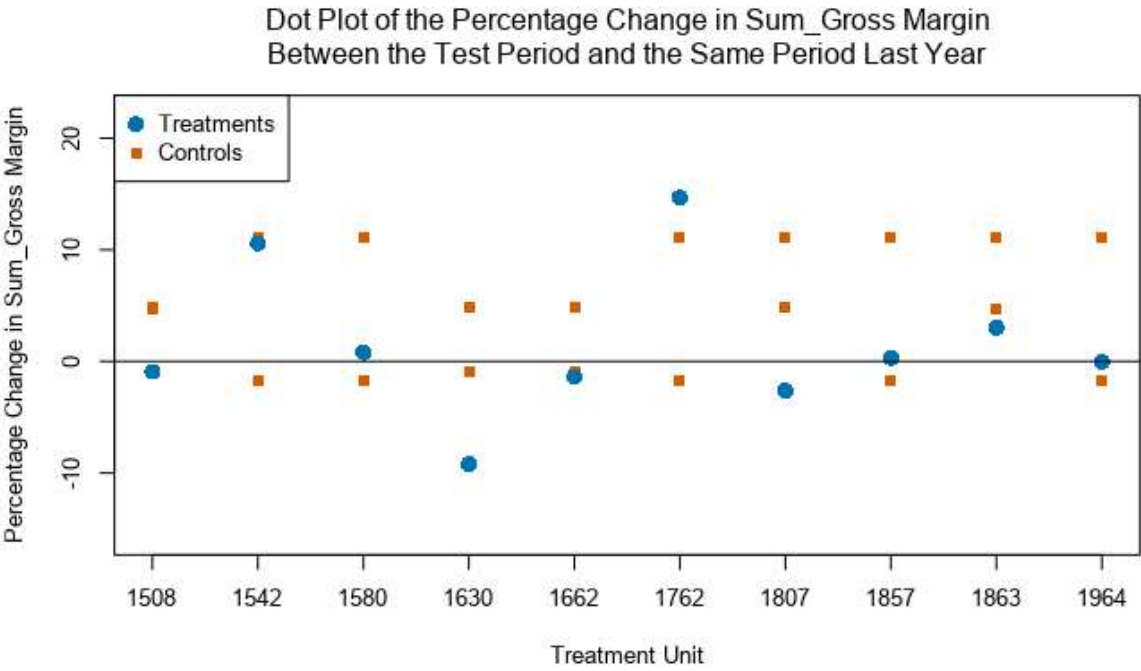
|       |                 |                    |
|-------|-----------------|--------------------|
| Lift  | Expected Impact | Significance Level |
| -5.2% | -89             | 100.0%             |

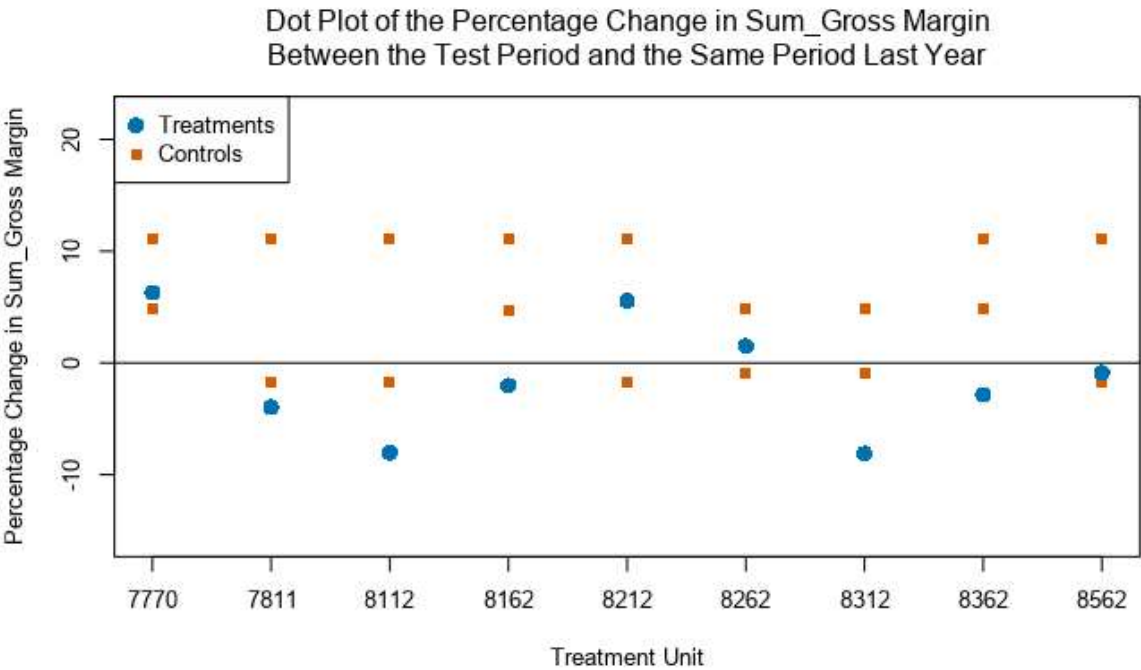
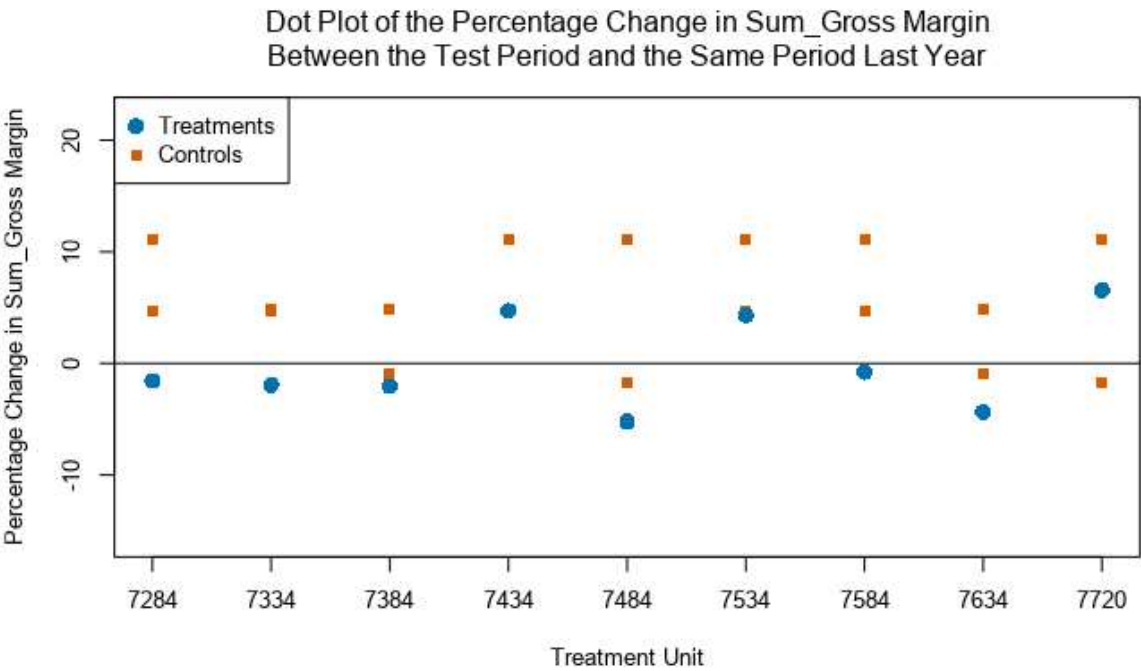
Summary Statistics for Sum\_Gross Margin by Test Group

|                    |           |         |
|--------------------|-----------|---------|
| Statistic          | Treatment | Control |
| Average            | -0.81     | 4.80    |
| Minimum            | -15.81    | -1.75   |
| Maximum            | 14.68     | 11.05   |
| Standard Deviation | 6.16      | 5.06    |

Plots of the Test Results

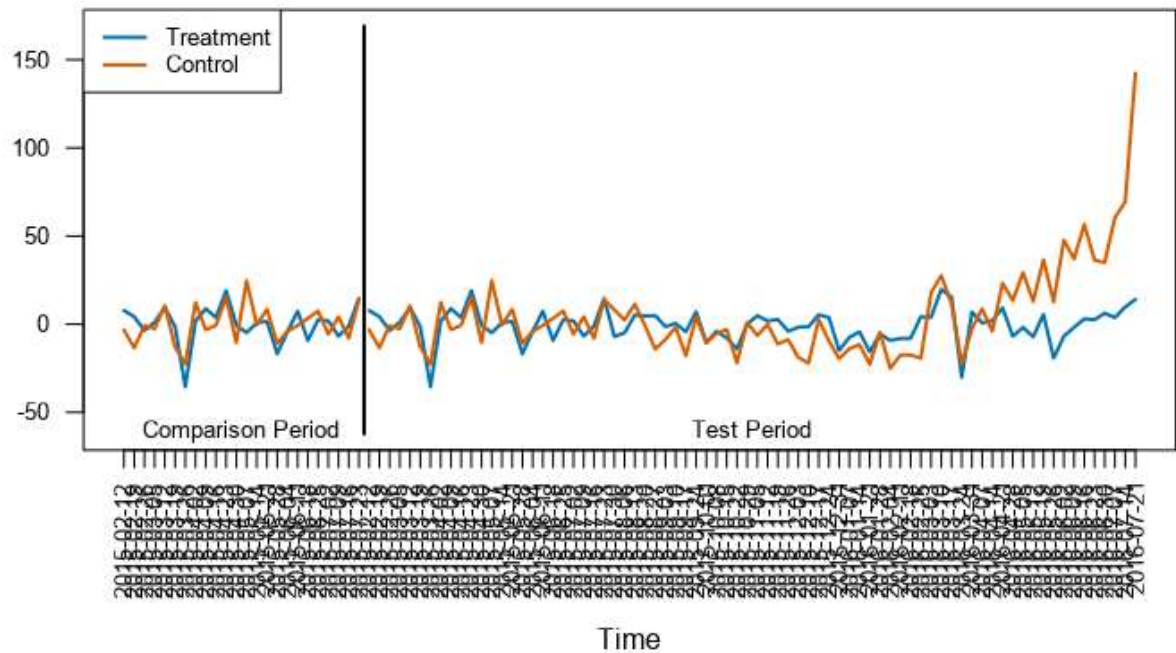
In the dot plot(s) below, each column of dots gives the percentage change in Sum\_Gross Margin from the same period as the test period, but one year earlier, and the test period for a treatment unit and the control units assigned to that treatment unit. An examination of a dot plot chart allows for a rapid determination of whether (and which of) the treatment units outperformed the control units with respect to Sum\_Gross Margin.





## Time Comparison Plot of Sum\_Gross Margin

% Difference from Comparison Period Average



The time comparison plot provides a visualization of the average effect of the test treatment across the test units for the performance measure of interest. The performance measure is normalized to be the percentage difference between the value of that measure in each reported time unit and the average of that measure for the entire comparison period, and then averaged across stores of each unit type (treatment or control) in each reported time unit.