# **Project: Analyzing a Market Test**

## **Step 1: Plan Your Analysis**

1. What is the performance metric you will use to evaluate the results of your test?

The performance metric I will use to evaluate my test results is the gross margin.

1. What is the test period?

The test period is from April 29th to July 21st, 2016.

1. At what level (day, week, month, etc.) should the data be aggregated?

The data should be aggregated to the week level.

## **Step 2: Clean Up Your Data**

## **Step 3: Match Treatment and Control Units**

1. What control variables should be considered?

The control variables that should be considered are the StoreID, the Average Month Sales, and the Regions.

1. What is the correlation between each potential control variable and your performance metric?

Each potential control variable has a positive correlation with the performance metric.

1. What control variables will you use to match treatment and control stores?

I will use the Trend, Seasonality, and Average month sales to match treatment and control stores.

1. Table below with your treatment and control stores pairs:

|  |  |  |
| --- | --- | --- |
| Treatment Store | Control Store 1 | Control Store 2 |
| 1664 | 1857 | 7484 |
| 1675 | 2114 | 8562 |
| 1696 | 1964 | 7584 |
| 1700 | 1508 | 7384 |
| 1712 | 7284 | 8212 |
| 2288 | 9081 | 12069 |
| 2293 | 11568 | 12219 |
| 2301 | 10018 | 10468 |
| 2322 | 2409 | 3102 |
| 2341 | 2333 | 11368 |

## **Step 4: Analysis and Writeup**

1. What is your recommendation - Should the company roll out the updated menu to all stores?

I think the company should roll out the updated menu to all stores because the lift from the new menu is above 20 % in all the regions, and the lift is 40.7%, with a significance level of 100 %. The significance level is 100%, so that we can trust the results.

**Expected Impact**

**Average Lift:** 40.7 %

**Sum Gross Margin**: $681.2

**Significance Level:** 100 %

1. What is the lift from the new menu for the West and Central regions (include statistical significance)?

The lift from the new menu for the West region is 37.9 % with a significance level of 99.5 %, and 43.5 % is for the Central region with a significance level of 99.6%.

## **AB Test Analysis for Sum Gross Margin**

**Expected Impact**

**Average Lift:** 43.5 %

**Sum Gross Margin:** $835.8

**Significance Level:** 99.6 %

## **AB Test Analysis for Sum Gross Margin**

**Expected Impact**

**Average Lift:** 37.9 %

**Sum Gross Margin:** $526.5

**Significance Level:** 99.5 %

1. What is the lift from the new menu overall?

The lift of the new menu overall is 40.7 %, with a significance level of 100 %.